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Fatemeh Bashashi Saghezchi

Avaliação da Qualidade em Serviços: um estudo para supermercados e hipermercados

Service Quality Assessment: a study of supermarkets and hypermarkets

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Service Quality Assessment: a study of supermarkets and hypermarkets

Dissertação apresentada à Universidade de Aveiro para cumprimento dos requisitos necessários à obtenção do grau de Mestre em Engenharia e gestão Industrial, realizada sob a orientação científica da Doutora Marlene Paula Castro Amorim, Professora Auxiliar do Departamento de Economia, Gestão e Engenharia Industrial da Universidade de Aveiro.

I dedicate this work to my dear family.

o júri

presidente

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agradecimentos

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palavras-chave Qualidade em Serviços, RSQS, Serviços de Retalho

resumo

O presente estudo teve como objetivo a análise das perceções de qualidade de serviço para distintos formatos de retalho, em particular para supermercados e hipermercados. A qualidade do serviço é abordadacomo um conceito multidimensional, contemplando quatro dimensões: aspectos físicos, interação pessoal,fiabilidade e políticas.Desta forma, é possível investigar a existência de diferenças na contribuição de cada dimensãopara a percepção de qualidade de serviço pelo cliente, assim como para as sua lealdade e intenções de recomendar o serviço.

O estudo foi realizado em Portugal, através de uma pesquisa abordando uma amostra de clientes de supermercados e hipermercados em áreas urbanas.

A análise dos dados incidiu sobre 248 questionários completos e contemplou: a caracterização das percepções de qualidade dos clientes, a partir de estatística descritiva; a realização de testes de hipóteses para a investigação de diferenças nas percepções para supermercados e hipermercados; e a estimação de regressões para analisar o impacto das diferentes dimensões de qualidade para a satisfação e lealdade dos clientes.

Os resultados apóiam a existência de diferenças na avaliação feita pelos clientes para a qualidade de serviço em supermercados e hipermercados.

keywords Service Quality, RSQS, Retail Services

abstract

This study provides an analysis of service quality perceptions across two distinct retail formats: supermarkets and hypermarkets. Service quality is addressed as a multidimensional concept, with four dimensions: physical aspects, personal interactions, reliability and policies. Such conceptualization enables the investigation of differences in the contribution of each dimension for overall service quality perception as well as for customer loyalty and recommendation intentions.

The study was conducted in Portugal, and addressed a sample of hypermarket and supermarket customers. Data analysis addressed 248 complete questionnaires, and included: the characterization of service quality perceptions using descriptive statistics; the investigation of differences in customer perceptions across supermarkets and hypermarkets by means of hypothesis testing; and the estimation of regressions to analyze the impacts of the different service quality dimensions for customer satisfaction and loyalty.

The results support the existence of differences in customer service quality evaluations across supermarket and hypermarket retail formats.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter 1

INTRODUCTION

The paramount importance of service quality for customer satisfaction and loyalty as well as its link with service providers' profitability are extensively documented in literature (Cronin et al. 2000). Consequently, the development of service quality models has been a key priority in the agendas of service scholars and has motivated an intense debate about the definition and assessment of quality in service contexts (see for example, Parasuraman et al., 1985; Cronin and Taylor, 1992; Grönroos 1993). Service quality models provide a description of the key components of service quality and the relationships among them and customer satisfaction. As such, they are tools that help managers to diagnose the performance in service delivery processes and to develop quality improvement programs (Seth et al., 2005).

Service quality influences customers' satisfaction and consequently affects customers' intentions to repurchase and to recommend a service that ultimately leads to provider's profitability (Reichheld and Sasser, 1990; Anderson and Fornell, 1994; Reinartz et al., 2004).

There is ample evidence to support the following relationships among service quality and customer behavior: service quality being the primary determinant of customer satisfaction (Fornell et al., 1996; Baggozi, 1992); customer satisfaction positively affecting customer intentions to repurchase the service and to recommend the service provider (Anderson, 1998; Danaher and Rust, 1996). Zeithaml et al. (1996) empirically show that superior quality perceptions were associated to positive customer intentions (e.g. recommending a given service provider), while inferior quality perceptions were linked to negative behaviors (e.g. switching provider). Nevertheless, research results indicate that the intensity of the impacts of service quality perceptions for customers' reuse and recommendation of the service are distinct. For example, it has been found that positive quality perceptions have a stronger impact for customers' reuse and therefore suggest that customers require increased levels of quality and satisfaction in order to recommend a service (Cronin et al., 2000; Gabarino and Johnson, 1999; Rust and Oliver, 1994).

This work investigates the extent to which service quality perceptions differ across distinct retail formats. We analyze the differences in customers' perceptions for hypermarket and supermarket

services for four service quality dimensions: physical aspects, personal interactions, reliability, and policies (Dabholkar et al., 1996; Vazquez et al., 2001).

In order to measure service quality, Dabholkar et al. (1996) validated the retail service quality scale (RSQS) consisting of five dimensions: physical aspects, reliability, personal interaction, problem solving, and policy, including 28 items. Vazquez et al. (2001) adapted this scale to a set of four dimensions—physical aspects, personal interactions, reliability, and policies—and 18 items, adjusted to the specificity of the reality of Spanish supermarkets, and Latin countries in general.

The rest of this thesis is structured as follows. In chapter two, we first provide the conceptual background of service, quality, and service quality. We then describe service quality dimensions for service quality measurement with a particular focus in retail service settings. Finally, we present the proposed quality model employed in this work. Chapter three presents the main research questions and the applied methodology. The study builds on the retail service quality scale (RSQS) scale to develop a survey, addressing customers of hypermarkets and supermarkets in Portugal. In chapter four, we conduct data analysis using SPSS software for 248 questionnaires. Along with descriptive statistics, t-tests are conducted to analysis the differences in service quality perceptions across the retail formats considered: i.e., supermarkets and hypermarkets. Regressions were estimated to investigate the impact of each service quality dimension for customer satisfaction and intentions to re-use and recommend the service. This chapter is concluded with an expectation-perception analysis for the service quality dimensions, for the two addressed retail formats. The results support the existence of differences in customers' perceptions for service quality dimensions in supermarkets and hypermarkets. *Reliability* and *policies* show strong impacts for customer satisfaction, and for customer recommendations. *Personal Interaction* aspects seem to play a key role for customers' intention to re-use the services. Finally, chapter five concludes the thesis with recommendations for future research.

Chapter 2

CONCEPTUAL FRAMEWORK OF SERVICE QUALITY

In this chapter, relevant works about service quality are reviewed. The chapter begins with a brief comparison between goods and services; then, concepts such as quality and service quality are described. This is followed by discussions about the importance of the service quality, service quality dimensions, and different scales for service quality measuring. Finally, the chapter concludes with the research model that we intend to apply in order to fulfill the objectives of this study.

2.1 Service concept

Since the term of service quality is a combination word of service and quality, a preliminary clear understanding of each these two concepts separately can be useful.

The term services can refer to a wide variety of business activities (e.g. communications, transportation, department stores, real estate, medical, professional services etc.), which makes it difficult to provide a short definition for the service that is valid in every service sector (Balin & Giard, 2006). Researchers have offered various definitions for service. Here, we will refer some of well-known authors' definitions which are collected by Balin and Giard (Balin and Giard, 2006, p. 1).

- ✓ "Activities, benefits or satisfactions which are offered for sale, or are provided in connection with the sale of goods" (American Marketing Association (AMA), 1960)

- ✓ "A service may be defined as a change in the condition of a person, or of a good belonging to some economic unit, which is brought about as the result of the activity of some other economic unit, with the prior agreement of the former person or economic unit." (Hill, 1977)

- ✓ "A service is any act or performance that one party can offer to another that is essentially intangible and does not result in ownership of anything. Its production may or may not be tied to a physical product." (Katler, 1987)

- ✓ "A service is an activity or series of activities of more or less intangible nature that normally, but not necessarily, take place in interactions between the customer and service employees and/or systems of the service provider, which are provided as solutions to customer problems." (Gronröos, 1990)

2.1.1 Comparison of goods and services

According to Ghobadian et al (1994), there are four essential differences between services and goods, namely: inseparability, heterogeneity, intangibility, and, perishability (as known as IHIP). In the following, we briefly present each of these differences.

Inseparability: In manufacturing industries, goods usually are produced in one place and then are delivered to other places for selling to customers (without knowing the end customers), but in service industries, services usually are consumed at the time of delivery which makes it difficult to hide mistakes or quality shortfalls.

Heterogeneity: As services are produced and consumed at the same time (due to the inseparability characteristic), different employees, as well as, the variety in the needs of each consumer make it difficult to reproduce a common service for customers with the same standards. However, typically there is no such a concern in goods production.

Intangibility: In contrast to goods, many services are essentially intangible. That is, they cannot be seen, touched, smelled or tasted. For instance, goodwill which consumer cannot feel it before purchasing a service, conversely consumers can see, feel, hear, smell, or touch the goods before of purchasing.

Perishability: Services are perishable in the sense that they cannot be stored, reproduce, returned and, resold. "The service provider needs to get the service right first time, every time" (Ghobadian et al., 1994, p. 45).

Blankson & Kalafatis (1999) presented two additional service characteristics: ownership and, non-standardization. Table 2-1 summarizes the differences between product and service elaborated by Macdonald (1994).

Table 2-1. Differences between Products and Services (Macdonald, 1994)

Product	***Service***
The customer receives a tangible product in the form of goods which can be seen and touched	The customer receives an intangible service which may or may not satisfy
The goods remain with the customer	Services are consumed at the moment of delivery
The production and delivery of goods are usually separated	Production, delivery and consumption of services are often at the same time
Few producers deal with customers	Most producers deal with customers
The customers is rarely involved with production	The customer is often closely involved with production
Goods can be serviced	Services have already been consumed and cannot be serviced
Goods are subject to liability but the producer has more opportunity to ameliorate the effect on the customer and thus the financial penalty	Services which do not meet the requirements are difficult to replace—the financial impact is usually total
Goods can be purchased to store in inventory to satisfy the customer's needs	Services cannot be stored but must still be available on customer demand
Goods can be transported to the point of sale	Some services are transportable (e.g. information through communication lines) but most require the transportation of the service provider
The quality of goods is relatively easy for customers to evaluate	The quality of services is more dependent on subjective perception and expectation
Goods are often technically complex—the customer therefore feels more reliant on producer	Services appear less complex—the customer therefore feels qualified to hassle the producer

2.2 Quality concept

Quality is a common familiar word that people always talk about. Customers are the final quality's judges. Every customer has its own perception from the quality based on its specific needs and

expectations (e.g., more security, without defects, being on time, comfortable, etc.). Hence, there are different points of view for the quality's definition, which are summarized by Table 2-2.

Table 2-2. Summarizes some basic definitions of the quality

Author(s)	***Definition***
ISO/IEC 8402 standard quality	The totality of features and characteristics of a product or a service that bear on its ability to satisfy stated or implied needs.
(Edwards, 1968)	Consists of the capacity to satisfy wants.
(Gilmore, 1974)	The degree to which a specific product satisfies the wants of a specific consumer.
(Crosby, 1979)	Conformance to requirement.
(Wayne, 1983)	User satisfaction.
(Price,1985)	Do it right first time.
(Juran , 1988)	Fitness for use.
(Kanji, 1990)	To satisfy customers' requirements continually.
(Ghobadian et al. 1994)	A different thing to different people.

Ghobadian et al (1994) classified also the variety of definitions for quality into five possible broad categories, which are summarized in Table 2-2.

Table 2-3. Five generic categories of Quality (Ghobadian et al., 1994)

N.	***Author(s)***	***Definition***
1	*Transcendent*	Innate excellence
2	*Product led*	The units of goodness packed into a product or service
3	*Process or supply led*	Conformance to requirement
4	*Customer led*	Satisfying customer's requirements Or Fitness for purpose
5	*Value led*	Cost to the producer and price to the customer OR Meeting the customer's requirements in terms of quality, price, and availability

2.3 Concept of service quality

According to Ghobadian et al. (1994), most of definitions of the service quality are conveyed by the 4th category (customer led). Parasuraman et al. (1985) defined service quality as a result of the comparison between customer expectations and the actual service performance which customers perceive. Some authors interpreted that service quality is a customer's judgment of the quality that they perceived from a delivered service. According to these views, service quality can be defined as the following equation:

Service Quality = Perception – Expectation

(Grönroos, 1984; Parasuraman et al., 1985)

Parasuraman et al. (1988) defined perceived service quality as "the degree and direction of discrepancy between consumers' perceptions and expectations" (Parasuraman et al., 1988, p. 1). Expectations are defined by Parasuraman, et al. as "desires or wants of consumers, i.e., what they feel a service provider should offer rather than would offer" (1988, p. 17). Figure 2-1 is provided by Berry et al (1985) for understanding the continuum of perceived service quality.

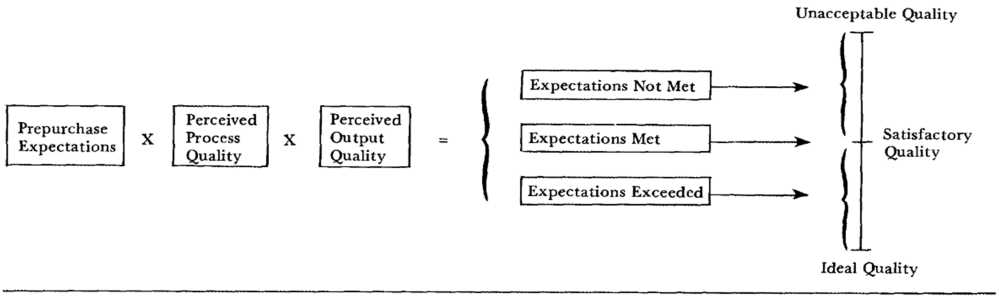

Figure 2-1. Continuum of perceived service quality (Berry et al., 1985)

Finally, Amorim et al. (2012) defined service quality as "a construct, featuring distinct dimensions which correspond to the diverse benefits that a customer can derive from a service".

2.3.1 Importance of the service quality

Service quality has a positive effect on the organization's profitability as illustrated in the following figure.

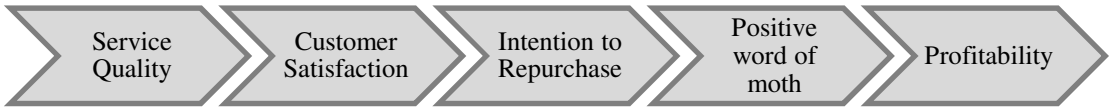

Figure 2-2. The procedure of how Service Quality leads Profitability (Amorim et al., 2012)

Service quality, nowadays, is considered as a competitive advantage for organizations (Ghobadian et al., 1994). According to Porter´s general strategies, sustainable competitive advantage is achieved from one of two strategies: low cost and differentiation. Many organizations have tried to satisfy their customers via a low cost strategy; however, in this era of intense competition, being only cost leadership in the market is not sufficient to sustain a competitive advantage.

Different competitors struggle to provide more facilities and more convenience to fulfill their customers' expectations; therefore, attention to service quality is essential to organizations to distinguish themselves from other competitors. According to Ladhari (2009) service quality is recognized as a critical success factor for a firm that helps it to differentiate itself from its competitors and earn greater profits.

Although, it may seem that service quality is a subject of concern for only service firms, it is worthwhile to note that "in some manufacturing industries service quality is considered a more important order winner than product quality" (Ghobadian et al., 1994, p.44). There are interesting evidences of market research that show how service quality influences profitability for existing and potential customers. High quality service leads to customer satisfaction and customer satisfaction is associated with customer loyalty and positive word of mouth (Fornell et al., 1996; Baggozi, 1992). This leads to increased loyalty of customers, but also in the improvement of the reputation of the company in long term (due to the spread of positive experience perceived by customers). In contrast, low quality service could repulse the existing and potential customers. Potential customers are influenced by the existing customers' recommendations. Word of mouth play as a powerful role for the attraction of new customers, who look for signs of quality (e.g., word of mouth, reputation).

According to Ghobadian et al. (1994) people hear about negative customer service experiences six times more than for the positive ones, and dissatisfied customers disclose their experience to at least three other people. Moreover, attracting a new customer costs about four times more than

retaining an existing customer. In conclusion, satisfying customers through service quality can be cost effective and can play significant role to attract new customers and gain above-average return[1].

2.3.2 Development of service quality models

Different characteristics of service, namely inseparability, intangibility, heterogeneity and, perishability make the measurement of service quality difficult but, organizations have to assess the service quality in order to identify how much their performance meet customer's expectations. Firms also need to know how to improve their service quality to fulfill any potential or existence gaps by comparing their current and previous performances. For this purpose, (Seth et al., 2005) identified 19 service quality models available with different points of view which help organizations. In fact, service quality models are tools that inform managers about the performance and execution of the service quality process. As such, they help managers to enhance quality improvement process by reviewing the key components of the service quality and customer satisfaction and the relationships among them. Inspecting various service quality models reveals that all models have two common features (Amorim et al., 2012):

First, these models are built on customers' perceptions about the performance of service delivery, rather than on objective assessments of quality items (Grönroos, 2001; Grönroos, 1982). Perceived service quality is defined as the customer's evaluation of the overall excellence of a service (Zeithaml, 1988), and has been persistently distinguished from objective quality measurements which were typically associated to the quality assessment of manufacturing products. The use of perceived service quality models is motivated by the specific nature of service outputs, which involve both tangible and intangible components and, as such, are often hard to assess, and can result into very heterogeneous evaluations across customers.

The second feature which is consensual across the existing quality models is the multidimensional nature of service quality. Services provide customers with a combination of outcomes: direct process results (e.g. the return of an investment in retail banking services, the on-time arrival to a flight destination in transportation services, etc.) along with other results related to the process experience resulting from customers' contact and involvement in the service process (e.g. trust in a banking transaction, comfort in a flight, etc.). Accordingly, service quality is addressed as a construct, featuring distinct dimensions which correspond to the diverse benefits that a customer can derive from a service, and service quality measurement models typically include multiple items for capturing customers' evaluations about the various output components.

[1] Above-average returns are returns in excess of what an investor expects to earn from other investments with a similar amount of risk.

Such multidimensional approaches are reflected in the measurement scales developed for assessing service quality. For example, the early work of Parasuraman, Zeithaml, and Berry (1985) proposes a scale (SERVQUAL) for measuring service quality that considers five quality dimensions: tangible elements, reliability, assurance, empathy and responsiveness. SERVQUAL has been applied to ample range of service business contexts over the years, revealing robustness and generalizability (Ladhari, 2009). Nevertheless, other scales have been developed in order to better address the specificities of particular service contexts. For example, Parasuraman et al. (2005) developed ES-QUAL and E-RecS-QUAL for the specific case of electronic retail services. The motivation for the development of a specific scale for the context of e-services was driven by the fact that the extant service quality scales were dominated by items related to people-delivered services, whereas equivalent measurement models for technology-delivered services were not available. ES-QUAL proposed 22 items organized in four service quality dimensions – efficiency, fulfillment, system availability and privacy. For E-RecS-QUAL the authors proposed 11 items and three dimensions – responsiveness, compensation and contact. Other examples of specific service scales include also LIBQUAL, which established itself as a protocol to assess the quality of libraries consisting of dimensions such as service affect, library as a place, etc. (Thomson et al., 2005). Overall such specific measurement scales aim to contemplate some particular service delivery features that are cannot be captured by the more generalist SERVQUAL approach. In the case of retail services, the quality assessed by customers combines aspects related to the quality of the goods delivered (which are not included in the SERQUAL model), together with the aspects related to the performance of the delivery process (i.e. process experience) (Baker et al., 2002). In the following table, we present three important service quality models.

Table 2-4. Service Quality Models

Model's name	***Year***	***Author(s)***	***Applied sector***	***Measuring by***
Technical and functional quality model	1984	Grönroos	Bank, Insurance companies	Technical quality, functional quality, corporate image
GAP model	1985	Parasuraman et al.	Banking, Credit card	Gap analysis through 10 dimensions of service quality: reliability, responsiveness, competence, access, communications, credibility, security, understanding, and tangible.

SERVQUAL	1988	Parasuraman et al.	Appliance repair and maintenance, Retail banking	SERVQUAL through 5 dimensions of service quality: tangibles, reliability, responsiveness, assurance, empathy

2.3.2.1 Perceived Service Quality Model

Grönroos presented the first service quality model in 1984 which is illustrated in Figure 2-3. Grönroos identified two dimensions for service quality, namely: technical or outcome quality and functional or process quality. Technical quality describes what customers actually receive from the organizations. Customers often could evaluate this kind of services in an objective manner. Functional quality describes how the customers get to the technical outcome. It is often perceived in a subjective manner because the quality evaluated by the customers while they interact with service providers. Another important component is the corporate image, which plays as a filter for organization and it is mainly affected by technical and functional quality of service.

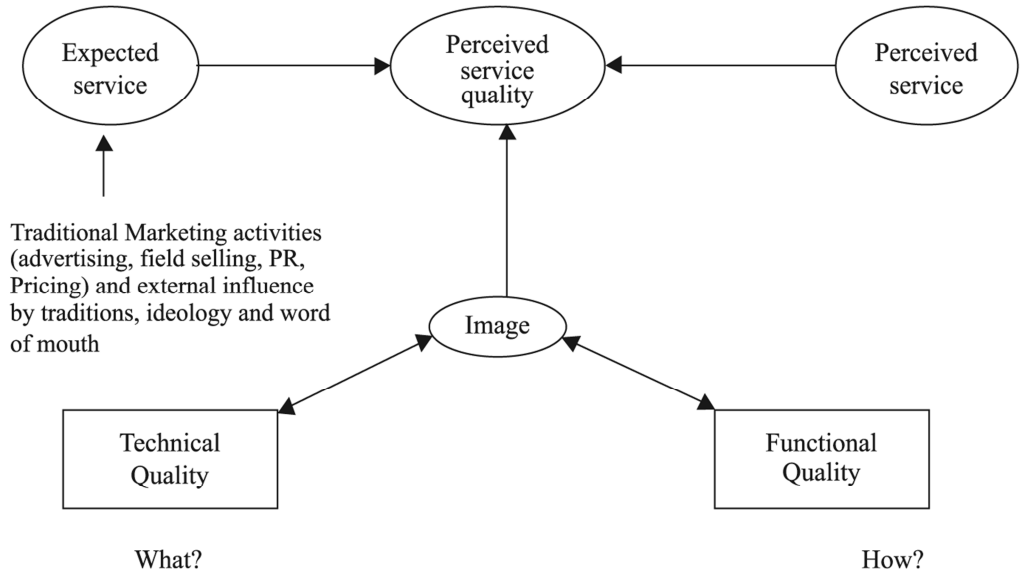

Figure 2-3. Service Quality Model (Grönroos, 1984)

2.3.2.2 Gap Model

Parasuraman et al. (1985) proposed a conceptual service quality model (Figure 2-4) in order to measure the service quality by considering the gap between the consumer´s perceptions about the actual received service, and what they expected to receive.

- ✓ If perceptions exceed expectations, the service quality will be considered excellent;
- ✓ If perceptions be equal to expectations, the service quality will be considered as good or adequate;
- ✓ If perceptions do not meet the expectations, the service quality will be considered as bad or poor.

Seth et al. (2005) expressed the same gap model in mathematical language: $SQ = \sum_{j=1}^{k} (P_{ij}-E_{ij})$ where:

SQ = Overall service quality;

k= Number of attributes;

P_{ij} = Performance perception of stimulus i with respect to attribute j;

E_{ij} = Service quality expectation for attribute j that is the relevant norm for stimulus i."

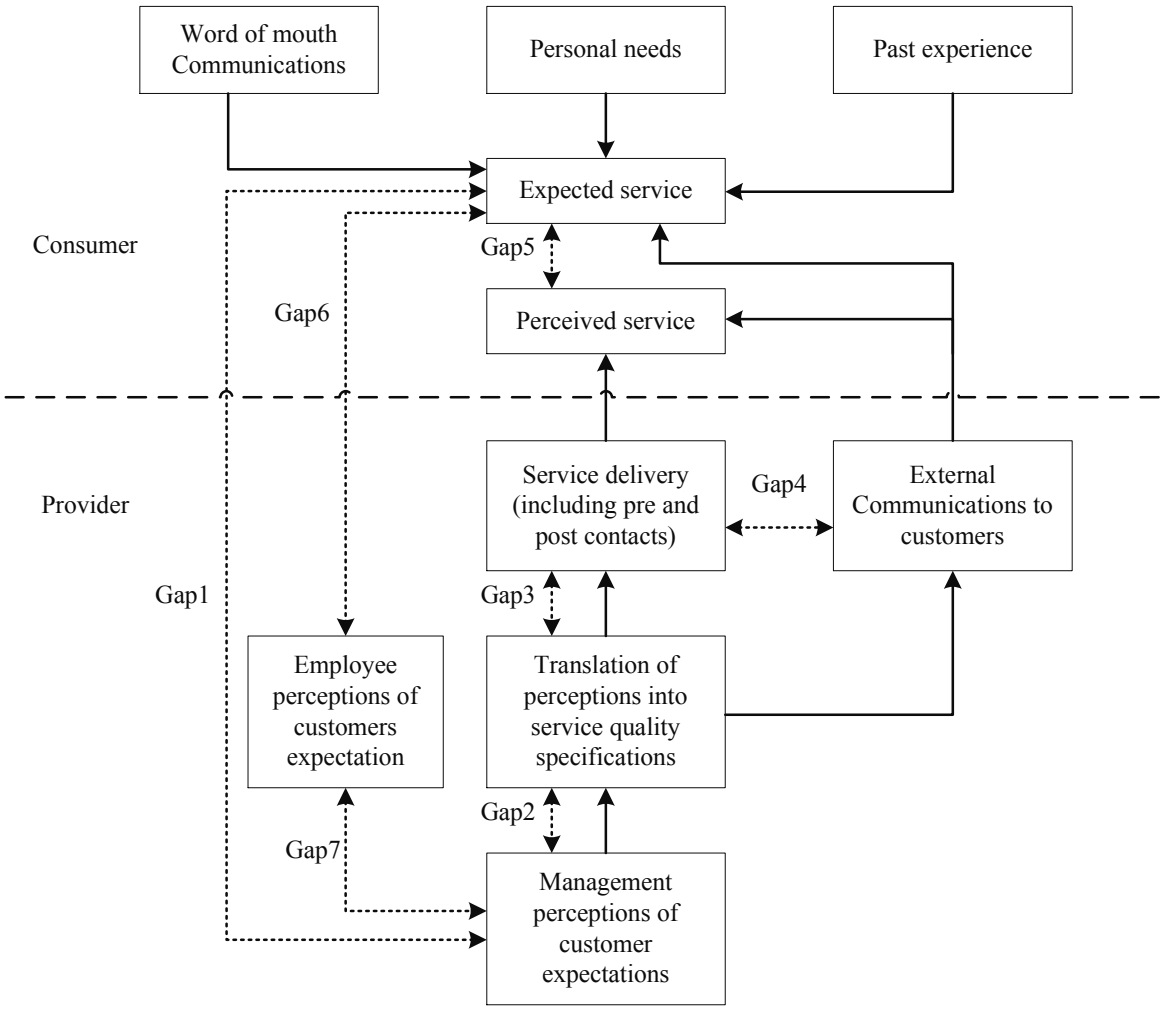

Figure 2-4. Service Quality Model (Parasuraman, 1985)

2.3.3 Service quality dimensions

Parasuraman et al. (1985) firstly proposed ten general dimensions for service quality: reliability, responsiveness, competence, access, courtesy, communications, credibility, security, understanding, and tangible. These dimensions were proposed following exploratory research work which investigated for standards which forms the evaluations or service quality by customers. Later these ten dimensions were decreased into five dimensions where reliability, responsiveness and tangible remained unchanged but the rest seven dimensions were reduced to two dimensions due to considerable correlation (Parasuraman et al., 1988; Yang et al., 2004). Competence, courtesy, credibility, and security were unified into a new dimension which was named assurance. On the other hand, access, communications, and understanding were unified into a new dimension which was named empathy. The definitions of these five dimensions are provided in Table 2-5 (Parasuraman et al., 1988).

Table 2-5. Five Dimensions of Service Quality (Parasuraman et al., 1988)

Dimensions	***Definitions***
Tangible	Appearance of physical facilities, equipment, appearance of personnel, and communication materials
Reliability	Ability to perform the promised service dependably and accurately
Responsiveness	Willingness to help customers and provide prompt
Assurance	Knowledge and courtesy of employees and their ability to inspire trust and confidence
Empathy	Caring, individualized attention the firm provides its customers

These five dimensions are considered as basic structure or foundation of a service quality assessment tool which is known as SERVQUAL (Parasuraman et al., 1985). SERVQUAL is a

service measurement scale composed of twenty two items (questions) in a later work, in 1994, one item scale was eliminated and the total items reduced to twenty one (Seth et al. 2005).

2.3.4 Service quality measurement

Although according to the specific nature of services there are difficulties to measure the service quality in comparison with good's quality, it is essential to organizations to evaluate their service quality in order to improve their performance. In the following, we will present three service quality assessment tools: SERVQUAL, SERVPERF, and Retail Service Quality (RSQS).

2.3.4.1. SERVQUAL

SERVQUAL is a multi-item global measurement instrument which was developed by Parasuraman et al. (1988) to evaluate the quality of service by comparing difference(s) between perceived service quality of the customer and their expectations. The five dimensions of service quality (reliability, responsiveness, assurance, empathy, and tangibles) constitute the base of SERVQUAL with 22 items for perceptions and 22 analogous items for expectations. Table 2-6 shows the perception items associated with each dimension. It should be noted that any company can modify these perception items according to the objectives of their assessment.

Table 2-6. SERVQUAL's Dimension with scale attributes

Dimensions of Service Quality	***Perception item***
Tangibles	P1. Modern equipment. P2. Visually appealing facilities. P3. Employees who have a neat, professional appearance. P4. Visually appealing materials associated with the service.
Reliability	P5. Providing services as promised. P6. Dependability on handling customers' service problems. P7. Performing services correctly the first time. P8. Providing services at the promised time. P9. Maintaining error-free records.
Responsiveness	P10. Keeping customers informed about when services will be performed.

	P11. Prompt service to customers. P12. Willingness to help customers. P13. Readiness to respond to customers' requests.
Assurance	P14. Employees who instill confidence in customers. P15. Making customers feel safe in their transactions. P16. Employees who are consistently courteous. P17. Employees who have the knowledge to answer customer questions.
Empathy	P18. Giving customers individual attention. P19. Employees who deal with customers in a caring fashion. P20. Having the customer's best interest at heart. P21. Employees who understand the needs of their customers. P22. Convenient business hours.

Table 2-7 summarizes some studies that have applied SERVQUAL as an instrument for service quality assessment. (Leen et al., 2008; Wang, 2003)

Table 2-7. Summary of empirical studies based on SERVQUAL

Authors	***Year***	***Research setting(s)***	***Key findings***
Carman	1990	Tyre store	Nine factors of service quality were identified using principal axis factor analysis.
Finn,Lamb	1991	Department stores	Confirmatory factor analysis did not provide a good fit to the proposed five-factor structure of SERVQUAL for either of department stores and discount stores.
Guiry,Huthinson,Weitz	1992	Retail store	Original 22 item SERVQUAL was modified to a 51 item instrument by dropping 7 items and adding 36 new items. Exploratory factor analysis revealed seven dimensions.

Gagliano,Kathryn Bishop	1994	Apparel specialty stores	Identified four factors two of which had no correspondence to SERVQUAL.
Gagliano & Hathcote	1994	clothing stores	The five-factor structure used in this study was reduced to four factors.

Service providers need to evaluate their service quality in order to be informed how their performance meets their customer satisfaction and to improve their service quality whenever it is necessary.

Sivadas & Baker (2000) presented the following model to investigate the existence relationship among the service quality, customer satisfaction and store loyalty in retail department stores based on a modified SERVQUAL instrument. Interestingly, the results (Figure 2-5) indicated that service quality directly impacted satisfaction, but satisfaction had no direct effect on loyalty.

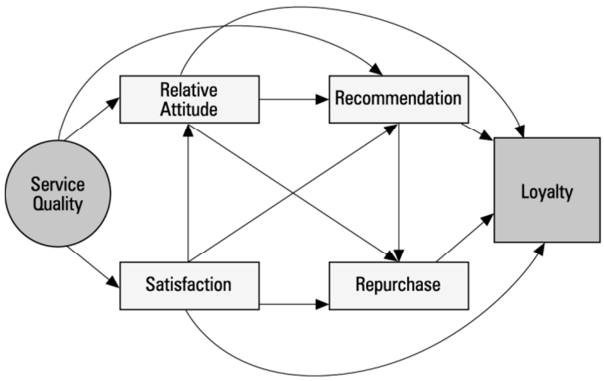

Figure 2-5. Hypotheses Model (Sivadas & Baker, 2000)

Wong and Kong (2003) empirically examined the impact of service quality dimensions (including reliability, responsiveness, assurance, empathy, and tangibles) on customer loyalty, on two levels of retail relationships: person-to-person (salesperson level) and person-to-firm (store level) in a large-chain departmental store in Victoria, Australia. They provided a conceptual model, which is illustrated by Figure 2-6, to support the two hypotheses of their study:

H1a-e. The dimensions of service quality are positively related to customer loyalty to the employee.

H2a-e. The dimensions of service quality are positively related to customer loyalty to the company.

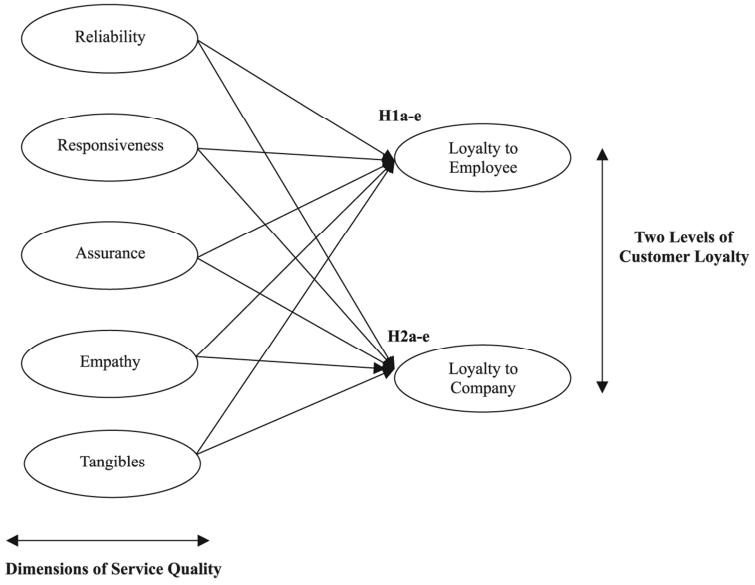

Figure 2-6. Hypothesized research model of Wong and Kong (Wong and Sohal, 2003)

They used a modified SERVQUAL instrument to measure the perceived service quality. For this purpose they carried 1,261 questionnaires with 29 items base on a seven-point Likert scale distributed among the shoppers. The results implied that there is a positive relationship between service quality and customer loyalty, and hypothesis H2 (customer loyalty to company) which is stronger than hypothesis H1 (customer loyalty to employee). Furthermore, among the service quality dimensions, tangibles and empathy attributes were the most significant predictor of customer loyalty at company and interpersonal (employee) levels, respectively.

They reasoned that the customers' tendency for having more loyalty towards the company—comparing to the employee level—may result from the fact that customers perceive the store's employees as part of the company.

2.3.4.2 SERVPERF scale

Cronin and Taylor (1992) had a critical view on SERVQUAL and proposed SERVPERF instrument in order to evaluate the service quality based on only in customer perceptions of performance instead of customer's perceived performance and expectations which is considered by SERVQUAL. Although SERVPERF is composed of the same 22 items of SERVQUAL, they argued that this tool performs better than SERVQUAL as it is based only on performance, which enables SERVPERF to provide greater variance in the overall service quality assessment. (Jane and Gupta, 2004).

2.3.4.3. The retail service quality scale

Dabholkar et al. (1996) argued that the instruments that had been widely used for measuring the service quality such as SERVQUAL (which was one of the well-known tools at that time) did not support sufficiently customers' perceptions of service quality in a retail store, which offers a mixture of merchandise and service. Customers receive a more diverse experience in a retail store than in other nonretail services (e.g., the quality of goods as well as the interaction with store employees) which influences the customers' evaluation of service quality; hence, some additional dimensions should be considered. Therefore, Dabholkar et al. (1996) proposed the hierarchical retail service quality scale (RSQS) (Figure 2-7) in order to measure the service quality.

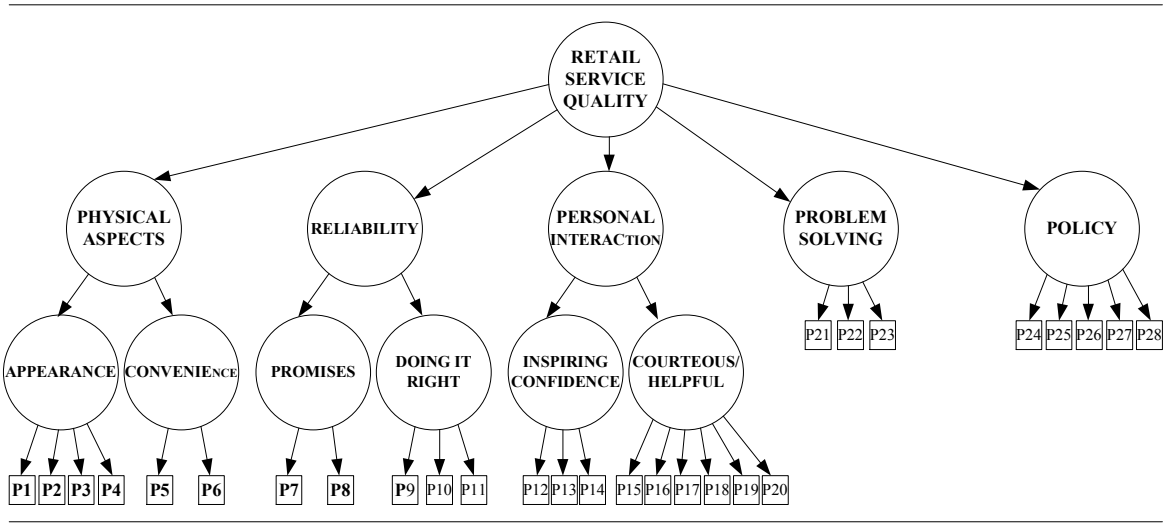

Figure 2-7. Proposed Hierarchical Structure for Retail Service Quality (Dabholkar et al., 1996)

RSQS is a hierarchical factor structure with 28 items, 17 items retained from SERVQUAL's items and the rest 11 items obtained from the researchers' qualitative work. Items are grouped into five basic dimensions (three of them comprise two sub dimensions):

1. *Physical aspects* – Retail store appearance and convenience of store layout

2. *Reliability* – Retailers keep to their promises and do the right things

3. *Personal interaction* – Store personnel are courteous, helpful, and inspire confidence and trust in customers

4. *Problem solving* – Store personnel are capable to handle returns and exchanges, customers' problems and complaints (ability to handle potential problems)

5. *Policy* – Store's policy on high-quality merchandise, parking, operation hours, acceptance of major credit cards, and availability of a store credit card.

In the following, Table 2-8 presents the perception items that belong to each dimension and subdimension.

Table 2-8. Factor Structure for the Retail Service Quality Scale (RSQS)

Dimensions	***Sub-dimensions***	***Perception item***
Physical aspects	*Appearance*	P1. This store has modern-looking equipment and fixtures.
		P2. The physical facilities at this store are visually appealing.
		P3. Materials associated with the store's service (such as shopping bags, catalogs, or statements) are visually appealing.
		P4. This store has clean, attractive, and convenient public areas (restrooms, fitting rooms).
	Convenience	P5. The store layout at this store makes it easy for customers to find what they need.
		P6. The store layout at this store makes it easy for customers to move around in the store.
Reliability	*Promises*	P7. When this store promises to do something (such as repairs) by a certain time, it will do so.
		P8. This store provides its services at the time it promises to do so.
	Doing-it-Right	P9. This store performs the service right the first time.
		P10. This store has merchandise available when the customers want it.
		P11. This store insists on error-free sales transactions and records.

	Inspiring Confidence	P12. Employees in this store have the knowledge to answer customers' questions. P13. The behavior of employees in this store instills confidence in customers. P14. Customers feel safe in their transactions with this store.
Personal Interaction	*Courteousness/ Helpfulness*	P15. Employees in this store give prompt service to customers. P16. Employees in this store tell customers exactly when services will be performed. P17. Employees in this store are never too busy to respond to customer's requests. P18. This store gives customers individual attention. P19. Employees in this store are consistently courteous with customers. P20. Employees of this store treat customers courteously on the telephone.
Problem Solving		P21. This store willingly handles returns and exchanges. P22. When a customer has a problem, this store shows a sincere interest in solving it. P23. Employees of this store are able to handle customer complaints directly and immediately.
Policy		P24. This store offers high quality merchandise. P25. This store provides plenty of convenient parking for customers. P26. This store has operating hours convenient to all their customers. P27. This store accepts all major credit cards. P28. The store has its own credit card.

Vázquez et al. (2001) used a new scale in order to measure the perceived service quality in supermarkets. For this purpose, they focused on four basic service quality dimensions, namely, physical aspects, reliability, personal interaction, and policies with 28 variables to measure service quality of supermarkets operating in the north of Spain. They argued that the instrument such as SERVQUAL is more appropriate for measuring service quality of pure service firms than retail stores providing goods and services. They discussed that without modification, SERVQUAL cannot use as a valid service quality measurement scale in retail companies. They proposed four service quality dimensions for supermarket companies as illustrated by Figure 2-8.

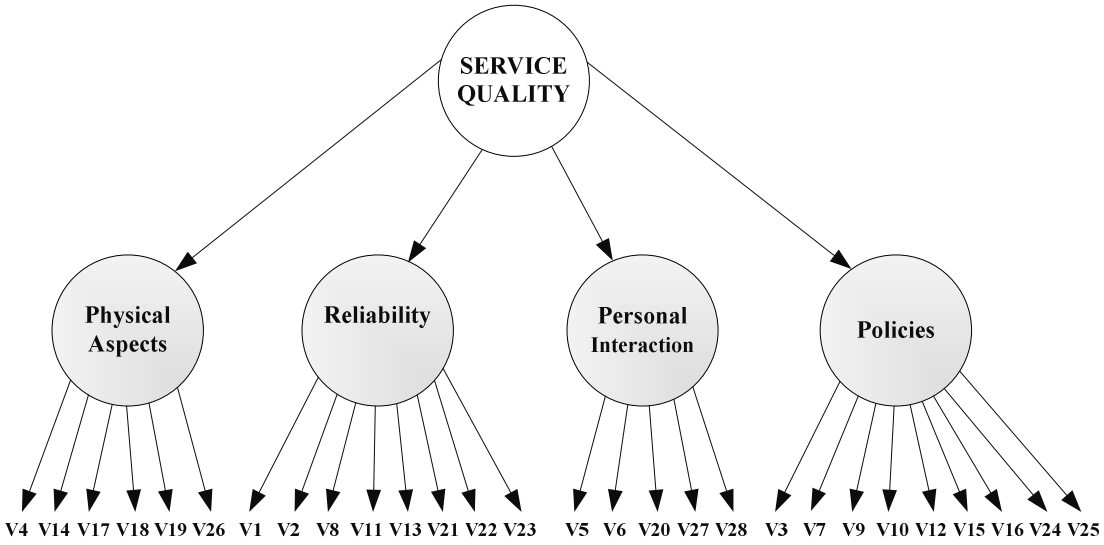

Figure 2-8. Structured proposed for retail service quality (Vázquez et al., 2001)

By considering "service quality" and "quality of products sold", Vázquez et al. (2001) proposed a new scale for service quality evaluation in supermarket companies, which they called it CALSUPER. Table 2-9 summarizes some studies that have applied RSQS as an instrument for service quality assessment. (Leen et al., 2008; Wang, 2003)

Table 2-9. Summary of empirical studies based on RSQS

Authors	*Year*	*Research Region*	*Key findings*
Dabholkar et al.	*1996*	Department store Chains/ Southeastern USA	A hierarchical factor structure was proposed comprising of five dimensions, with three of five dimensions having two subdimensions each and overall service quality as a second order factor.

Christo & Terblanche	*1997*	Hypermarket shoppers/ South Africa	Hierarchical factor structure. The five factor structure of retail service quality dimensions suggested by Dabholkar et al. (1996) resulted in a reasonable fit.
Mehta et al.	*2000*	Supermarkets and electronic goods retailers/ Singapore	RSQS was discovered to be more suited in a "more goods, less services" environment, i.e. a supermarket, while SERVPERF was better for a retailing context where the service element is prevalent. A modified scale resulting from a combination of RSQS and SERVPERF was developed. Five new factors were identified from this modified scale.
Siu & Cheung	*2001*	Multinational department store chain/ Hong Kong	Six factors emerged as opposed to the five factor structure suggested in RSQS.
Kim & Jin	*2002*	Discount stores/ USA and Seoul, Korea	A three-factor structure was found. The RSQS presented a better fit for the US sample than the Korean consumers.
Kaul	*2005*	Specialty apparel stores/ India	RSQS dimensions not valid in India. Indian retailing found to have a four dimension structure. At the sub dimensions level. A four factor structure instead of six factors was supported.

2.4 Applied model

In this section, we describe the model that we apply for this study, based on the reviewed literatures. It has been documented in the literature that customers' quality perceptions are likely to be influenced by aspect related to their personal characteristics as well as by situational variables (Bäckström and Johansson, 2006). Personal characteristics are intrinsic to the consumer and might influence their experiences (e.g. values, age, attitude to time, etc.). Situational variables include

aspects in the store environment that might influence consumers. In the context of retail supermarkets and hypermarket stores offer customers distinct service formats in several aspects such as, the accessibility and the characteristics of the facilities, the store assortment, etc. (Colla, 2004). In this study we explore the existing differences in customers' perceptions for hypermarket and supermarket services, for four service quality dimensions: physical aspects, personal interactions, reliability and policies. We also investigate the impact of each service quality dimension for customer satisfaction and intentions to re-use and recommend the service.

Based on the studies that we reviewed in the previous section, there are two candidate tools that we can apply for service quality assessment in our study, namely SERVQUAL and RSQS. Although it is claimed that SERQUAL is mostly appropriate in the pure service setting, we observe that some studies (e.g., Sivadas & Baker, 2000; Wong and Kong, 2003) employ SERVQUAL tool to measure service quality in retail departmental store as well.

Figure 2-9 illustrates our proposed models based on RSQS since in retail environment customers look at quality from two perspectives: services as well as goods.

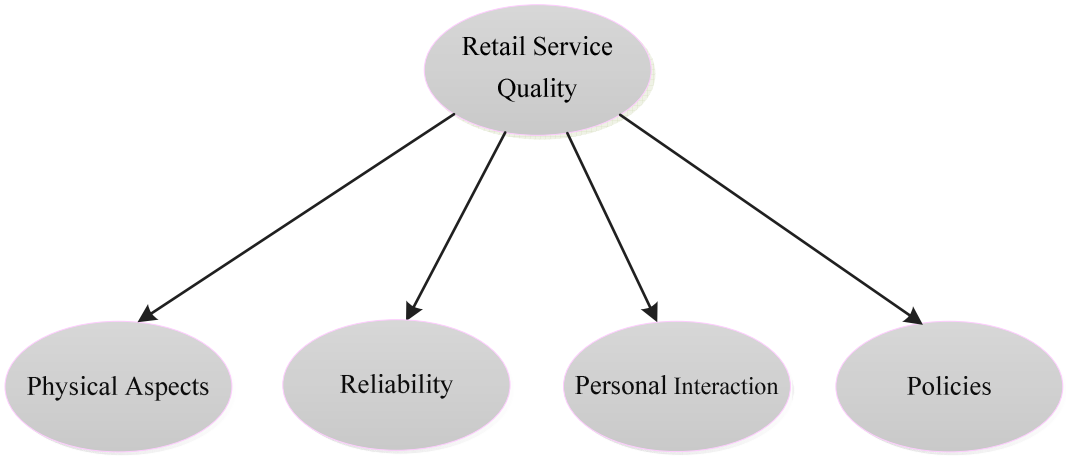

Figure 2-9. Applied model based on RSQS (Vázquez et al., 2001)

Chapter 3

METHODOLOGY

This chapter presents the research methodology, and the steps that were followed in the conduction of this study to reach the research objectives. In particular, we discuss the questionnaire design, the pilot study and questionnaire amelioration, the data collection process, and the data analysis methods adopted.

3.1 Overview of research methodology

Questionnaire is used as a tool for data collection in this study. The data is obtained in two different ways, namely by manual and online administration, both in Portuguese and English languages. Providing an English version could give opportunity to acquire more answers, since there are more than 40 nationalities of students present at the University of Aveiro.

The aim of the study is to investigate the extent to which service quality perceptions differ across distinct retail formats. The study sets out to analyze the differences in customers' perceptions for hypermarket and supermarket services, for four service quality dimensions: *physical aspects*, *personal interactions*, *reliability* and *policies* (Dabholkar et al., 1996; Vazquez et al., 2001). Therefore, the questionnaire is built based on the following objectives:

- To evaluate the perceived service quality in retail stores from the customers point of view (across retail formats).
- To explore which service quality dimensions have major effect on customer satisfaction, reuse intention, and word of mouth.

3.2 Design of the questionnaire

We conducted a survey with retail customers in Portugal. The survey addressed customers of supermarkets and hypermarkets in order to meet the purpose of collecting data for investigating differences in quality expectations and perceptions across these distinct retail formats. Survey design was inspired in the work of Dabholkar et al. (1996) and Vázquez et al. (2001). Building on the RSQS we developed a questionnaire with 24 items related to distinct quality aspects of retail service contexts.

Based on literature review, RSQS (The Retail Service Quality Scale) was found as an appropriate scale in this study to measure the service quality of customer's perception in retail stores where merchandise as well as service is provided. In order to align the RSQS measurement instrument with objectives of our study, we modified the scale accordingly. In order to evaluate the perceived service quality in retail stores from the customer's point of view specifically in supermarkets and hypermarkets, we designed the questionnaire that was inspired from the questionnaires provided by Dabholkar et al. (1996) and Vázquez et al. (2001).

Dabholkar et al. (1996) provided the RSQS model, the instrument that used to assess customers' perceptions of service quality in retail stores which offer a mix of products and services. Vázquez et al. (2001) measured the service quality in supermarkets retail store through four factors namely, physical aspects, reliability, personal interaction, and policies. The summaries of the two papers that are used for designing the questionnaire are presented in the following table.

Table 3-1. A Comparison between the service quality scales proposed by Dabholkar et al. (1996) & Vázquez et al. (2001)

Authors	***Dabholkar et al. (1996)***	***Vázquez et al. (2001)***
Research setting/ Country	Department stores Chains/ Southeastern United States	Supermarkets/ Spain
Measurement items	28	28
Scale used	Five-point Likert	Ten-point Likert
Dimensions	physical aspects, reliability, personal interaction, problem solving and policies	physical aspects, reliability, personal interaction and policies
Sample size	227 (197 women & 27 men)	267 (209 women & 58 men)

In Table 3-2 we present a list of the 24 items used, identifying, for each item, the reference source paper where it was originally proposed, and the respective dimensions associated to each item.

Most of the items adopted in the survey were present either in the scale developed by Dabholkar et al. (1996) or in the modified version proposed by Vázquez et al. (2001). Items 14 and 18 were added to the list by the authors as they were mentioned to be relevant in initial exploratory interviews conducted with Portuguese retail customers. Other items (such as items 7 and 20) were subject to minor modifications to adjust them to the Portuguese retail context.

Table 3-2. Retail service quality items used in the study

Items	***Dabholkar et al (1996)***	***Vázquez et al (2001)***
Physical Aspects		
1. Modernity and attractiveness of store facilities, equipment and fixtures.	✓	✓
2. Visual attractiveness of publicity leaflets and other materials related to the service, such as shopping bags, catalogs, etc.	✓	✓
3. Cleanliness of the store and available support services (e.g., w c, safe-boxes, etc.).	✓	✓
4. Store layout and organization enabling customers to easily find the products they need.	✓	✓
Reliability		
5. Clear indication of product prices.		✓
6. Appropriate and punctual information about sales promotions and discounts.		✓
7. Short waiting time at cash registers.	Modified	✓
8. Easy location of products on promotion or discount.		✓
9. Employees showing great interest and motivation to resolve any difficulties or customer problems.		✓
10. Stock availability of products/brands desired by customers.	✓	✓
11. Guarantees of product quality and possibility of returns.		✓
Personal Interaction		
12. All employees consistently showing courtesy towards customers (e.g., cashiers, replenishment staff, etc.).	✓	✓
13. All employees consistently willing to help customers (e.g., cashiers, replenishment staff, etc.).	✓	✓
14. Employees showing enough knowledge to assist and advise customers in the fresh sections (e.g., fish, fruits, etc.)	Modified	Modified
15. Employees having enough knowledge to assist customers in difficulties and questions.	✓	✓
16. Employees instilling confidence in customers when assisting or advising them.	✓	✓

Policies		
17. Offer of interesting sales promotions and discounts.		✓
18. Offer of free choice of alternatives for payment (e.g., in cash, via store card, credit card, etc.)	Modified	Modified
19. Offer of product prices which are lower than in similar establishments.		✓
20. Freshness and quality of products offered in the fresh sections (e.g., fish, fruit, etc.)	Modified	✓
21. Offer of products from well-known and leading brands in the market.		✓
22. Offer of a wide assortment of product brands and varieties.		✓
23. Offer of products from the retailers' own brand with high quality.		✓
24. Ease of access to the store and availability of parking spaces.	✓	

The questionnaire included therefore a set of 24 items regarding customers' expectations about retail stores followed by a set of 24 items concerning their perceptions about the retail store (hypermarket or supermarket) that they visited most often. A rating scaled from 1 – Not Important to 7 – Extremely Important was adopted for the survey items. The questionnaire included also a set of questions for describing customers' socio-demographic characteristics, notably regarding gender, age and education levels. The development of the questionnaire involved a set of preliminary interviews with retail customers and the application of a pilot questionnaire, prior to data collection, with the purpose of improving the wording and ordering of the questions.

3.2.1 Initial questionnaire

A first questionnaire which was designed for data collection had three parts: (The initial questionnaire can be found in Appendix I.)

- In the first part of the questionnaire we had provided a table to distinguish the customers' expectations about supermarkets and hypermarkets. In fact, this part of the work is considered to obtain potential difference expectations between service characteristics that consumers expect from supermarkets; i.e., retail stores of small/medium size located in urban centers and hypermarket; i.e., retail stores of large size usually located in the outskirts.
- The second part of the work was allocated to the characteristics of the retail store that the customer uses most often.

- Finally, the third part was allocated to two required questions and some socio-demographic information, about gender and age.

3.2.2 Pilot study

In order to find out any weakness in designing the questionnaire and getting comments and suggestions from responders, a pilot study was conducted with a small sample of two separate groups (Walonick, 2010; Statistics Canada, 2010). The first group was composed of five youth people (in their 20s) who were studying at the university and, the second one was composed of five older people (in their 40s or so). The main objectives of the pilot study were:

- If the questions are clear and understandable
- If the questions are properly ordered

During the conduction of the pilot, we found out that the questions were clear and properly ordered. However in the beginning of the second part of the questionnaire, where the respondents had to indicate the type of store he/she goes most often, had some ambiguity as the responders doubted if they had to select either two stores (one store from supermarket and another from hypermarket) or just one store (from the list of supermarket and hypermarket).

3.2.3 Final questionnaire

After the pilot study, the first part of the questionnaire was modified because there were no differences between respondents' expectations for the service characteristics for the two types of retail stores (i.e., supermarket and hypermarket). We left the items without any modification as they were clear and understandable to every pilot responder. Then, we conducted a pretest in order to finalize the modified questionnaire, after which the questionnaire was ready to distribute. Appendix II shows the refined questionnaire which was used in this study as the final questionnaire. The questionnaire included 4 sections:

Section A: Service quality expectations

The first section of this questionnaire included 24 items covering the four dimensions of the RSQS model, namely: physical aspects, reliability, personal interaction, and policies. In order to know customers' opinion about the essential characteristics of the service in a retail store, respondents were asked to indicate the importance that they attributed to each of the 24 retail service characteristics.

A seven-point Likert scale was used as illustrated in the following table, with 1 representing that the characteristic is "not important", while 7 representing that the characteristic is considered to be "extremely important".

Table 3-3. Seven-point Likert scale (from not important to extremely important)

Score	***1***	***2***	***3***	***4***	***5***	***6***	***7***
Importance	Not important	Low importance	Slightly important	Neutral	Moderately important	Very important	Extremely important

Section B: Service quality perceptions

In the second section of the questionnaire, after indicating the name of the retail store that the responder visits most often, 24 items were again presented to capture the respondent's perception about the retail store. Customers' were asked to express the degree to which they agreed or disagreed with each statement describing their selected store attributes. As explained by the Table 3-4, 1 was used to represent "strongly disagree", while 7 was used for "strongly agree".

Table 3-4. Seven-point Likert scale (from strongly disagree to strongly agree)

Score	***1***	***2***	***3***	***4***	***5***	***6***	***7***
Agreement	Strongly disagree	Disagree	Disagree somewhat	Undecided	Agree somewhat	Agree	Strongly agree

Section C: Service quality perceptions

In this section three items were used to obtain some information about the customers overall satisfaction, recommendation, and loyalty to the store. These items are as follows:

1. I recommend this store to other customers.
2. In the future, I anticipate that I will continue to use this store quite often.
3. Overall, I am satisfied with the service provided by this store.

Section D: Socio-demographic characteristics

Finally, the questionnaire included a set of questions related to customers' socio-demographic characteristics, with three items: gender, age, and education. Categories for age and education were defined in accordance to the categorization adopted by the Portuguese office for statistical information as of Instituto Nacional de Estatística (INE) of 2011 (Censos, 2011).

3.3 Sample selection and size

The questionnaire was applied to sample of retail customers in the area of Aveiro in Portugal. The target respondents addressed were retail customers which were users of the main supermarkets and hypermarkets located in this region. A total of 270 questionnaires were distributed, and from these 9 were returned with incomplete answers, for which they were discarded form the analysis. From the remaining 261, 13 of them were obtained from respondents who were customers of supermarkets which were not the main retailers operating in the country. Data analysis builds therefore on the remaining 248 complete questionnaires, from respondents who declared to use one of the main supermarkets or hypermarkets in the country. The sample included a balanced representation of customers from each gender (46,85% male customers), age and education levels. It also included a balanced representation of customers of both retail formats (50,8% of the respondents declared to be predominately users of supermarkets, while 49,2% were users of the hypermarket retail format).

3.4 Sample characteristics

Gender

The sample included a balanced representation of customer from both genders. Table 3-5 summarizes the sample characteristics in terms of the gender of the respondents. According to Table 3-5, 46.8% (116 respondents) of the sample were male and 53.2% (132 responders) who answered the questionnaire were female. Figure 3-1 illustrates in a pie diagram the distribution of respondents based on gender.

Table 3-5. Sample characteristics based on gender

Gender	*Frequency*	*Percentage*
Male	116	46.8
Female	132	53.2
Total	248	100

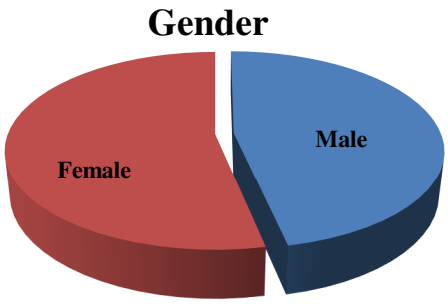

Figure 3-1. Pie diagram based on gender distribution

Age

The distribution of respondents by age groups is summarized in Table 3-6 More than 50% of respondents belong to particular age group (under 25) and 96.4% of respondents have less than 41 years old. People in the age range of 41-50 and over 50 are less represented in the sample. This occurred because of two reasons:

1 - Most of the questionnaires were distributed in the university campus and online

2 - Older people are less likely to fill out the questionnaire by themselves; it seemed that they tend to pass it to do by their children or relatives. Figure 3-2 illustrates in a pie diagram the distribution of respondents based on age.

Table 3-6. Sample characteristics based on age

Age	*Frequency*	*Percentage*
Up to 25	163	65.7
From 26 to 30	51	20.6
From 31-40	25	10.1
From 41-50	7	2.8
Over 50	2	0.8
Total	248	100

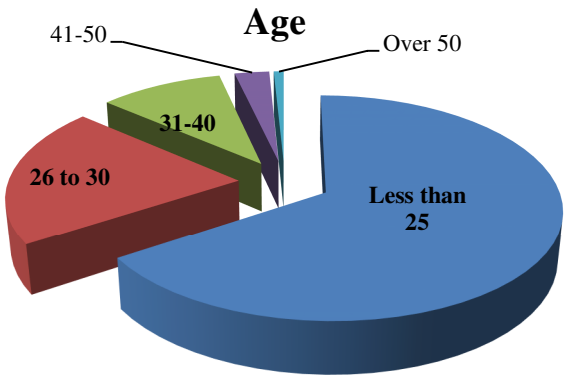

Figure 3-2. Pie diagram based on age distribution

Education

Table 3-7 and Figure 3-3 illustrate the education level of respondents. We can see that around 72% of the sample has (academic) university education. As stated before most of the questionnaires have been distributed in the university campus.

Table 3-7. Sample characteristics based on education

Degree	*Frequency*	*Percentage*
Elementary school	2	0.8
High school	68	27.4
Undergraduate	105	42.3
Master	62	25.0
Doctorate	11	4.4
Total	248	100

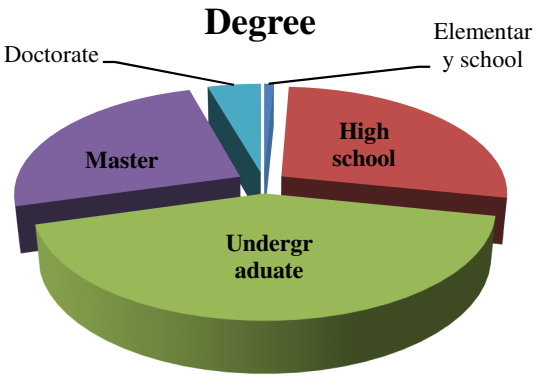

Figure 3-3. Pie diagram based on respondent's degree

Chapter 4

DATA ANALYSIS

This chapter presents the data analysis conducted for this study. Data analysis involved firstly the characterization of customer service quality assessments for the two retail formats considered, using descriptive statistics. T-tests were performed to investigate for significant differences in customer quality evaluations across supermarket and hypermarket settings. In order to analyze the importance of the various service quality dimensions included in RSQS for customers' quality assessments, we used linear regression models to estimate the relationships between the service quality dimensions, identified in RSQS scale and customer satisfaction, and customer behavioral intentions (to re-use and to recommend the service), for the two different retail store formats. Prior to the analysis we used Cronbach's alpha reliability statistic to determine the internal consistency of the survey instrument adopted for the study. The value for the Cronbach alpha statistic was 0,917 therefore supporting the consistency of the scale and its adequacy for use in the context of this study (Streiner, 2003).

In the following, we present the statistical results for customers' expectations and perceptions, as well as for the existing gap between these two parameters for the various retail service quality items. However, a prior comment must be made about the stores that respondents visited the most, as these were specifically asked in the questionnaire (the survey asked respondents to refer to the store that they visited most often). The stores most often visited by respondents were very diverse. According to more than 95% of the respondents were frequent users of one of the main supermarkets or hypermarkets in the region (i.e. Pingo Doce or Minipreço, and Jumbo or Continente). The remaining respondents used smaller stores, which are excluded from our analysis. The analysis addressed only users of the main retail stores for the two retail formats considered—supermarkets or hypermarkets as represented in Table 4-1.

Table 4-1. Stores that the respondents visit most often

Store	***Frequency***	***Percent***	***Valid Percent***	***Cumulative Percent***
Pingo Doce	100	38,3	38,3	38,3
Minipreço	26	10,0	10,0	48,3

Continente	55	21,1	21,1	69,3
Jumbo	67	25,7	25,7	95,0
Lidl	2	,8	,8	95,8
Intermarche	5	1,9	1,9	97,7
E.Leclerc	3	1,1	1,1	98,9
El Corte Inglés	1	,4	,4	99,2
Spar	1	,4	,4	99,6
Santa Justa	1	,4	,4	100,0

Therefore, the considered sample for the analysis consisted of respondents which were users of the main stores as follows:

Table 4-2. Considered stores for the analysis

Store	***Frequency***	***Percent***	***Valid Percent***	***Cumulative Percent***
Pingo Doce	100	40,3	40,3	40,3
Minipreço	26	10,5	10,5	50,8
Continente	55	22,2	22,2	73,0
Jumbo	67	27,0	27,0	100,0
Total	100	100,0	100,0	

4.1 Descriptive statistics

4.1.1 Expectations about retail store characteristics

The questionnaire included a set of questions regarding the customers' expectations about retail store characteristics. According to respondents' answers which are presented in Table 4-3 the most important item to the customers is E20 "freshness and quality of products offered in the fresh sections (e.g., fish, fruit, etc.)" with the mean value of 6,54, while the least important item is E2 "visual attractiveness of publicity leaflets and other materials related to the service, such as shopping bags, catalogs, etc." with the mean value of 4,71.

Table 4-3. Customers' expectations of retail store characteristics

	Total	
	Mean	***Std. Deviation***
Modernity and attractiveness of store facilities, equipment and fixtures.	5,21	1,073
Visual attractiveness of publicity leaflets and other materials related to the service, such as shopping bags, catalogs, etc.	4,71	1,363
Cleanliness of the store and available support services (e.g., w c, safe-boxes, etc.).	6,40	,973
Store layout and organization enabling customers to easily find the products they need.	6,19	1,026
Clear indication of product prices.	6,44	,938
Appropriate and punctual information about sales promotions and discounts.	5,85	1,231
Short waiting time at cash registers.	5,92	1,112
Easy location of products on promotion or discount.	5,76	1,169
Employees showing great interest and motivation to resolve any difficulties or customer problems.	6,13	1,070
Stock availability of products/brands desired by customers.	5,88	1,100
Guarantees of product quality and possibility of returns.	6,22	,957
All employees consistently showing courtesy towards customers (e.g., cashiers, replenishment staff, etc.).	6,07	1,136
All employees consistently willing to help customers (e.g., cashiers, replenishment staff, etc.).	5,96	1,083
Employees showing enough knowledge to assist and advise customers in the fresh sections (e.g., fish, fruits, etc.)	5,71	1,186
Employees having enough knowledge to assist customers in difficulties and questions.	5,83	1,116
Employees instilling confidence in customers when assisting or advising them.	5,58	1,215
Offer of interesting sales promotions and discounts.	5,57	1,192
Offer of free choice of alternatives for payment (e.g., in cash, via store card, credit card, etc.)	5,94	1,263
Offer of product prices which are lower than in similar establishments.	6,02	1,170
Freshness and quality of products offered in the fresh sections (e.g., fish, fruit, etc.)	6,54	,912
Offer of products from well-known and leading brands in the market.	5,20	1,288
Offer of a wide assortment of product brands and varieties.	5,69	1,288
Offer of products from the retailers' own brand with high quality.	5,65	1,308
Ease of access to the store and availability of parking spaces.	5,69	1,252

More details of respondents' answers about the most and least expectation items can be observed in Figure 4-1 and Figure 4-2 ranging from 1 (not important) to 7 (very important).

In Figure 4-1 it can be observed that freshness and quality of products which are offered in the fresh sections of the retail store (e.g., fish, fruit, etc.) are very important for customers. From 248 respondents, 186 of them considered value 7 for this item; on the other hand, as Figure 4-2 shows, among the expectation items of the survey, visual attractiveness of publicity leaflets and other materials that are related to the service, such as shopping bags, catalogs, etc. is not as important as the rest of the items.

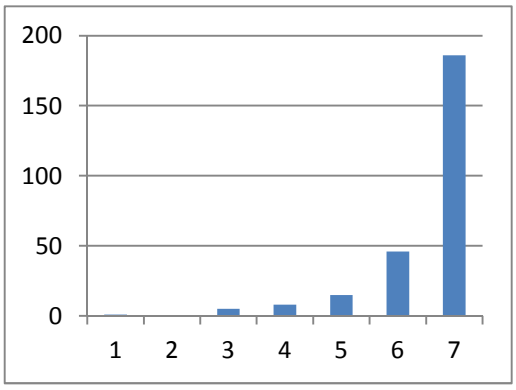

Figure 4-1. Frequency of the most important item of customers' expectation (E20)

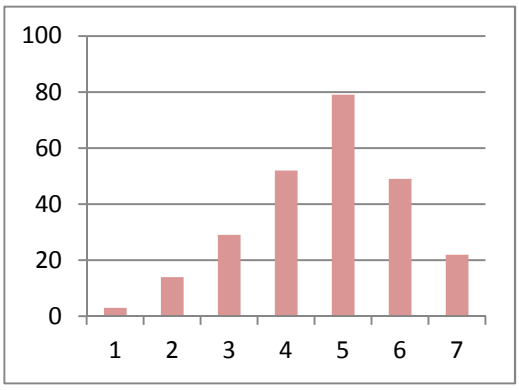

Figure 4-2. Frequency of the least important item of customers' expectation (E2)

Looking at the expectations for items under each of the four retail service quality dimensions suggests that for customers' the most important dimension is reliability, followed by: personal interaction, policies, and physical aspects, respectively. Figure 4-3 provides an illustration for the mean value of each of the expected service quality's dimensions for each gender. It can be observed that women expressed higher expectations than men, for all the dimensions, and that the biggest difference concerned the expectations for personal interaction.

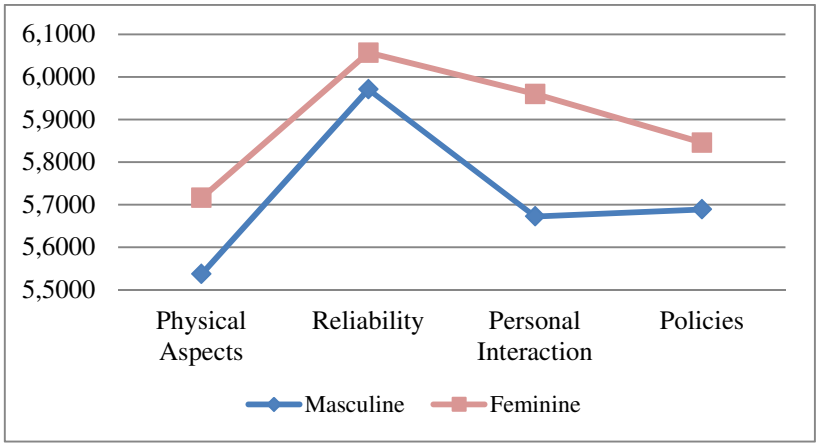

Figure 4-3. Mean value of the expected service quality's dimensions based on gender

Figure 4-4 provides an illustration for the mean value of the expectations for each service quality dimensions, for respondents in different age categories. This analysis suggests that the dimension of reliability is the most important dimension for all age groups except the 4th one (i.e., respondents in the age range of 41-50 years old), for whom the importance of reliability is the second most important dimension—after the personal interaction dimension.

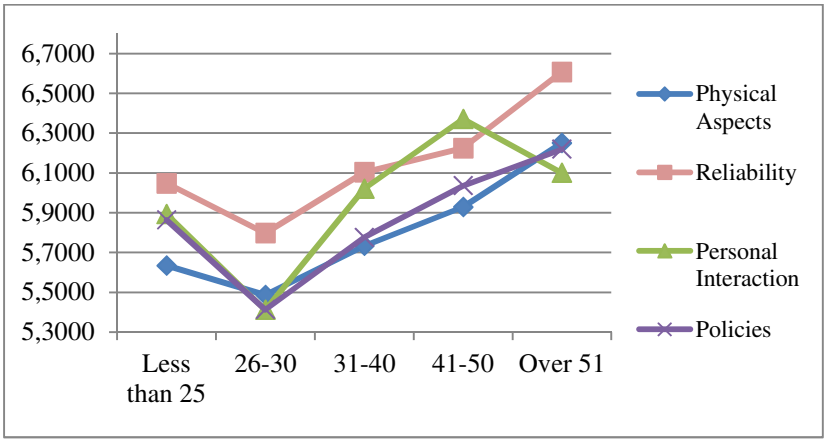

Figure 4-4. Mean value of the expected service quality's dimensions based on age

4.1.2 Perceptions about retail store characteristics

The questionnaire included a set of questions about the customers' perceptions of the retail store that they visited more often. According to respondents' answers which are presented in Table 4-4, customers are most satisfied with P21 "Offer of products from well-known and leading brands in the market" with the mean value of 5,75. On the other extreme, customers are least satisfied with P7 "Short waiting time at cash registers" with the mean perception value of 4,52.

Table 4-4. Customers' perceptions of the retail store that they visited more often

	Total	
	Mean	***Std. Deviation***
The store offers modern and attractive facilities, equipment and fixtures.	5,11	1,154
The publicity leaflets and other materials related to the service (such as shopping bags, catalogs, etc.) are visually attractive.	4,87	1,298
The store and available support services (e.g., w c, safe-boxes, etc.) are adequately clean.	5,63	1,109
The store layout and organization enables customers to easily find the products they need.	5,32	1,228
Prices are clearly indicated.	5,52	1,230
The store gives appropriate and punctual information about sales promotions and discounts.	5,28	1,224
The waiting time at cash registers is short.	4, 52	1,514
The products on promotion or discount are easy to locate in the store.	5,10	1,329
The store employees show great interest and motivation to resolve any difficulties or customer problems.	4,93	1,367
The products/brands desired by customers are always available.	5,21	1,380
The store guarantees the quality of the products and offers the possibility of returns.	5,33	1,305
All store employees consistently show courtesy towards customers (e.g., cashiers, replenishment staff, etc.).	5,23	1,283
All store employees are consistently willing to help customers (e.g., cashiers, replenishment staff, etc.).	5,27	1,306
Store employees show enough knowledge to assist and advise customers in the fresh sections (e.g., fish, fruits, etc.)	5,18	1,279
Store employees in general have enough knowledge to assist customers in difficulties and questions.	5,12	1,186
Store employees instill confidence in customers when assisting or advising them.	5,19	1,214
The store offers interesting sales promotions and discounts.	5,24	1,330
The store offers customer free choice of alternatives for payment (e.g., in cash, via store card, credit card, etc.)	5,27	1,979
The store has product prices which are lower than in similar establishments.	4,96	1,351
The store offers fresh and quality of products in the fresh sections (e.g., fish, fruit, etc.)	5,56	1,126
The store offers products from well-known and leading brands in the market.	5,75	1,177
The store offers a wide assortment of product brands and varieties.	5,57	1,354
The store offers high quality products from its own brand.	5,69	1,314
The store is easy to access to the store and has good availability of parking spaces.	5,68	1,440

According to the respondents' answers, customers' perceptions for each of the four service quality dimensions are described in the following paragraphs.

Physical Aspects

This dimension is a combination of the following items:

1. The store offers modern and attractive facilities, equipment and fixtures.
2. The publicity leaflets and other materials related to the service (such as shopping bags, catalogs, etc.) are visually attractive.
3. The store and available support services (e.g., w c, safe-boxes, etc.) are adequately clean.
4. The store layout and organization enables customers to easily find the products they need.

As Figure 4-5 illustrates, in general, women perceived higher service quality in the physical aspects dimension as compared to men. The highest and the lowest differences belong to P4 "store layout and organization enables customers to easily find the products they need" with the mean difference of 0,38 and P1 "store offers modern and attractive facilities, equipment and fixtures" with the mean difference of 0,00, respectively.

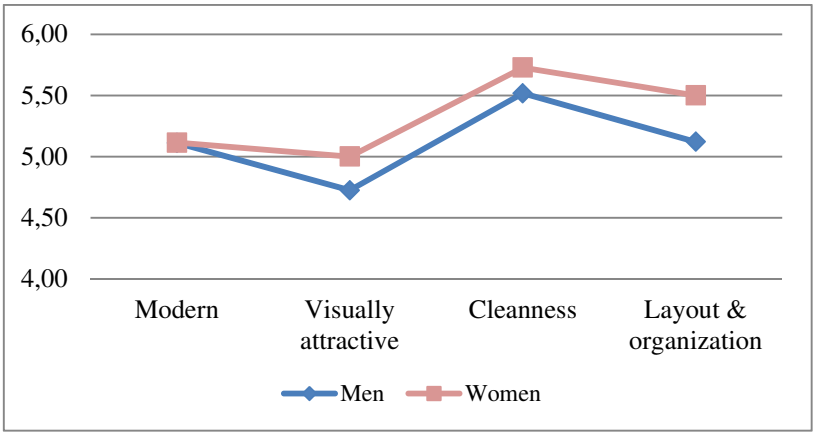

Figure 4-5. Customer's perceptions from physical aspect dimension based on gender

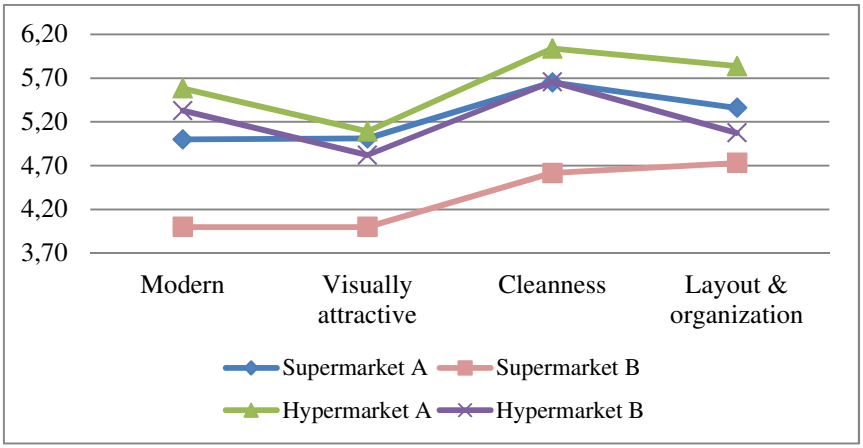

Figure 4-6. Customer's perceptions from physical aspect dimension based on retail stores

The next comparison concern customer's perceptions for physical aspects of the service across the different retail store formats considered in the study. Figure 4-6, illustrates how the highest perceptions for the physical aspects dimension were expressed for the case of hypermarket A. Likewise, users of supermarket B expressed the lower perceptions for this dimension.

Table 4-5 and Figure 4-7 show customer's perceptions for physical aspects for the two retail formats (supermarket and hypermarket). These results suggest that, in general, customers had higher perceptions in the case of hypermarkets as compared to supermarkets, for in all items concerning the dimension physical aspects. The smallest and biggest differences for items in the dimension of physical aspects across retail formats was found for, respectively,P2 "publicity leaflets and other materials related to the service (such as shopping bags, catalogs, etc.) are visually attractive" (with a 0,14 mean difference), and P1 "store offers modern and attractive facilities, equipment and fixtures" (with a 0,65 mean difference).

Table 4-5. Customer's perceptions from physical aspect based on retail format

Store Type		*Modern*	*Visually attractive*	*Cleanness*	*Layout & organization*
Supermarket	Mean	4,79	4,80	5,44	5,23
	N	126	126	126	126
	Std. Deviation	1,175	1,252	1,170	1,247
Hypermarket	Mean	5,44	4,94	5,83	5,42
	N	122	122	122	122
	Std. Deviation	1,037	1,344	1,010	1,205
Total	Mean	5,11	4,87	5,63	5,32
	N	248	248	248	248
	Std. Deviation	1,154	1,298	1,109	1,228

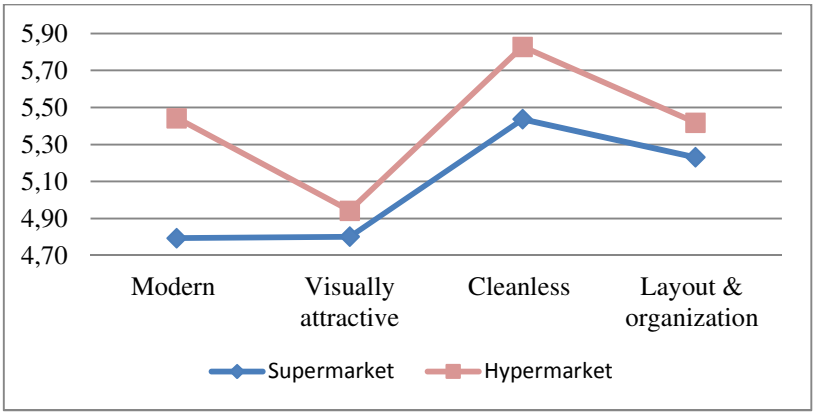

Figure 4-7. Customer's perceptions from physical aspect based on retail format

Reliability

This dimension aggregated the following seven items:

5. Prices are clearly indicated.
6. The store gives appropriate and punctual information about sales promotions and discounts.
7. The waiting time at cash registers is short.
8. The products on promotion or discount are easy to locate in the store.
9. The store employees show great interest and motivation to resolve any difficulties or customer problems.
10. The products/brands desired by customers are always available.
11. The store guarantees the quality of the products and offers the possibility of returns.

As observed from Figure 4-8 (and similarly to the physical aspects dimension) women expressed higher perceptions than men, for all items of the reliability dimension. This was particularly evident for item P6 "store gives appropriate and punctual information about sales promotions and discounts" (with a mean difference value of 0,61). The smallest differences between gender perceptions were found for P5 "Prices are clearly indicated" (with a mean difference value of 0,12), and for P7 "waiting time at cash registers is short" and P10 "products/brands desired by customers are always available" (with a mean difference value of 0,13).

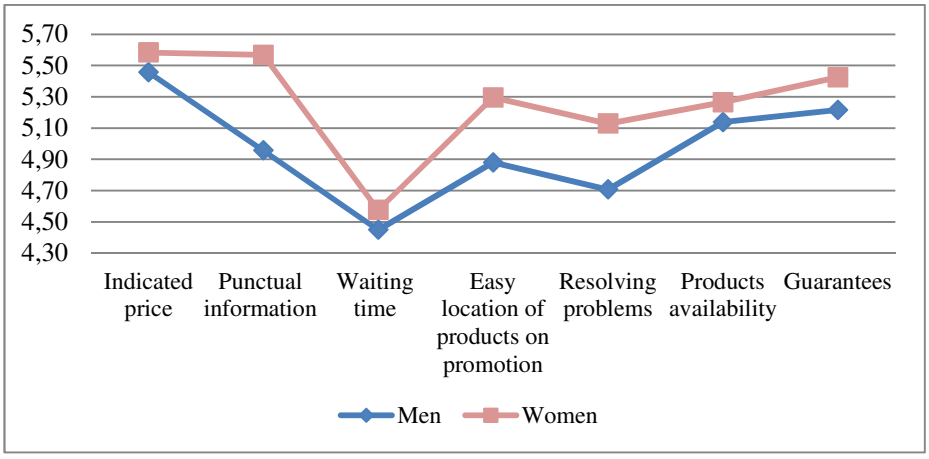

Figure 4-8. Customer's perceptions from reliability dimension based on gender

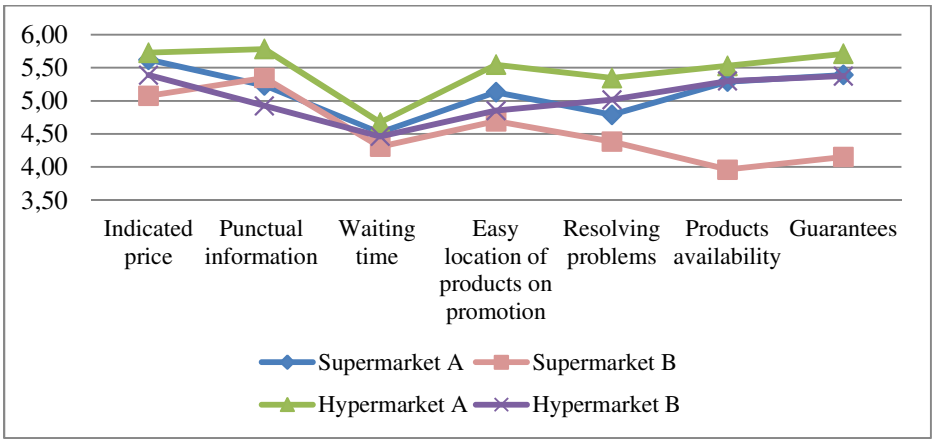

Figure 4-9. Customer's perceptions from reliability dimension based on retail stores

Figure 4-9 shows that considering the reliability dimension, customers have perceived the highest and the lowest service quality from hypermarket A and supermarket B, respectively.

A final comparison can be made here again for customer's perceptions for the reliability dimension across the two retail formats. This analysis is presented in Table 4-5 and Figure 4-10. In Table 4-5 it is possible to observe that customers perceive higher service quality from hypermarkets than for supermarkets, for this reliability dimension. The smallest and the biggest differences between supermarket and hypermarket perceived by customers were item P5 "prices are clearly indicated" (with a mean difference of 0,03) and P9 "store employees show great interest and motivation to resolve any difficulties or customer problems" (with a mean difference of 0,46), respectively.

Table 4-6. Customer's perceptions from reliability dimension based on retail format

Store Type		*Indicated price*	*Punctual information*	*Waiting time*	*Easy location on promotion*	*Resolving problems*	*Products availability*	*Guarantees*
Supermarket	Mean	5,51	5,25	4,48	5,04	4,71	5,02	5,13
	N	126	126	126	126	126	126	126
	Std. Deviation	1,071	1,138	1,563	1,189	1,374	1,425	1,388
Hypermarket	Mean	5,54	5,31	4,56	5,16	5,16	5,40	5,52
	N	122	122	122	122	122	122	122
	Std. Deviation	1,380	1,312	1,466	1,462	1,326	1,309	1,187
Total	Mean	5,52	5,28	4,52	5,10	4,93	5,21	5,33
	N	248	248	248	248	248	248	248
	Std. Deviation	1,230	1,224	1,514	1,329	1,367	1,380	1,305

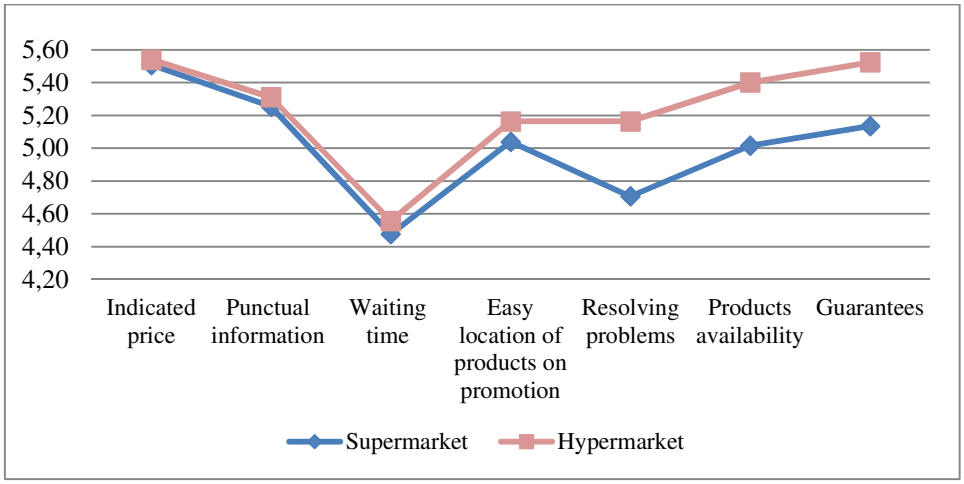

Figure 4-10. Customer's perceptions from reliability dimension based on retail format

Personal interaction

The third dimension included the following five items:

12. All store employees consistently show courtesy towards customers (e.g., cashiers, replenishment staff, etc.).
13. All store employees are consistently willing to help customers (e.g., cashiers, replenishment staff, etc.).
14. Store employees show enough knowledge to assist and advise customers in the fresh sections (e.g., fish, fruits, etc.)
15. Store employees in general have enough knowledge to assist customers in difficulties and questions.
16. Store employees instill confidence in customers when assisting or advising them.

In Figure 4-11, we can see that women expressed higher perceptions than men, for all items of the dimension of personal interaction. The minimum and the maximum mean gender differences were found for item P14 "employees show enough knowledge to assist and advise customers in the fresh sections (e.g., fish, fruits, etc.)" (with a 0,06 mean difference) and item P16 "employees instill confidence in customers when assisting or advising them" (with a 0,37 mean difference).

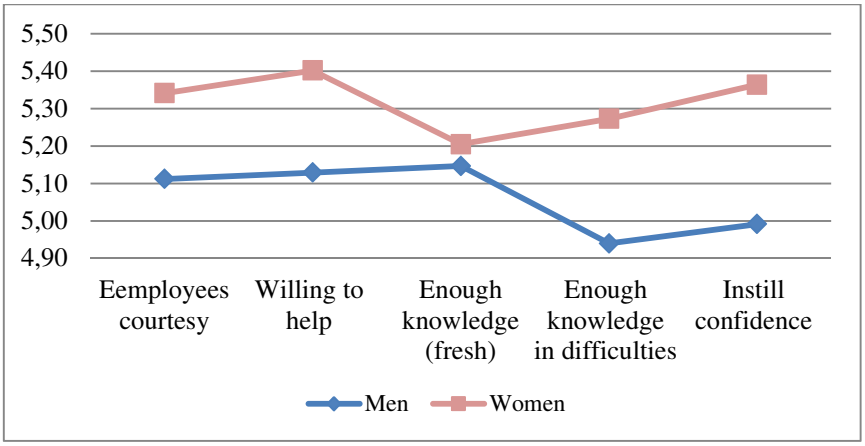

Figure 4-11. Customer's perceptions from personal interaction dimension based on gender

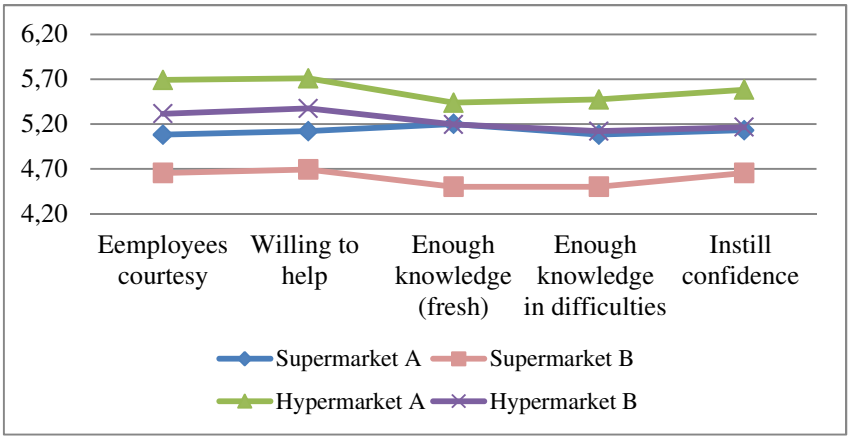

Figure 4-12. Customer's perceptions from personal interaction dimension based on retail stores

Figure 4-12 illustrates how for this dimension of personal interaction customers had higher perceptions for hypermarket A, while the perceptions for supermarket B were lower. Table 4-7 and Figure 4-13, show that customers reported that they perceived higher service quality with this dimension in hypermarkets as compared to supermarkets for all items of the dimension of personal interaction. This difference is small (with a 0,24 mean difference) for P14 "employees show enough knowledge to assist and advise customers in the fresh sections (e.g., fish, fruits, etc.)". As

seen before in Figure 4-13, this item has the lowest difference across customers of different gender, too. The biggest difference were found for P12 "employees consistently show courtesy towards customers (e.g., cashiers, replenishment staff, etc.)" and P13 "employees are consistently willing to help customers (e.g., cashiers, replenishment staff, etc.)" (with the same mean difference of 0,49 for both items).

Table 4-7. Customer's perceptions from personal interaction dimension based on retail format

Store Type		*Employees courtesy*	*Willing to help*	*Enough knowledge (fresh*	*Enough knowledge in difficulties*	*Instill confidence*
Supermarket	Mean	4,99	5,03	5,06	4,96	5,03
	N	126	126	126	126	126
	Std. Deviation	1,330	1,338	1,286	1,155	1,277
Hypermarket	Mean	5,48	5,52	5,30	5,28	5,35
	N	122	122	122	122	122
	Std. Deviation	1,187	1,228	1,265	1,201	1,128
Total	Mean	5,23	5,27	5,18	5,12	5,19
	N	248	248	248	248	248
	Std. Deviation	1,283	1,306	1,279	1,186	1,214

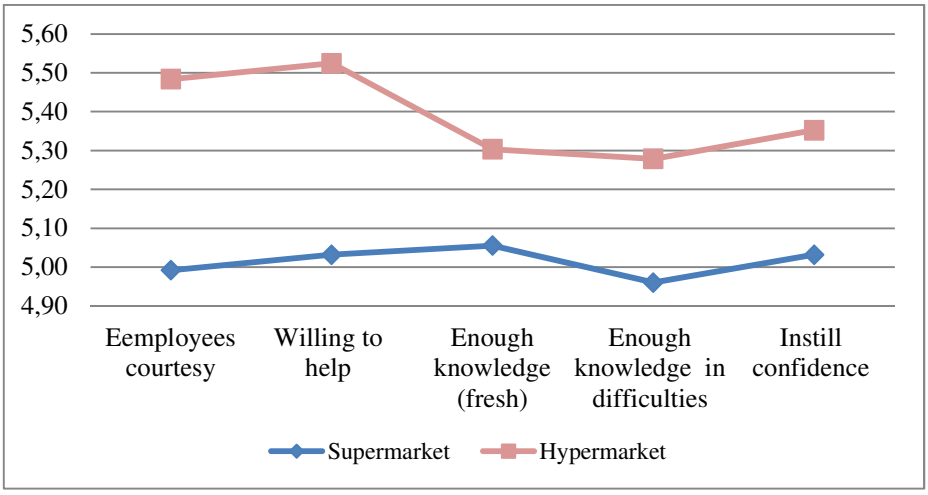

Figure 4-13. Customer's perceptions from personal interaction dimension based on retail format

Policies

The last dimension consisted of the following eight items:

17. The store offers interesting sales promotions and discounts.
18. The store offers customer free choice of alternatives for payment (e.g., in cash, via store card, credit card, etc.)

19. The store has product prices which are lower than in similar establishments.
20. The store offers fresh and quality of products in the fresh sections (e.g., fish, fruit, etc.)
21. The store offers products from well-known and leading brands in the market.
22. The store offers a wide assortment of product brands and varieties.
23. The store offers high quality products from its own brand.
24. The store is easy to access and has good availability of parking spaces.

As seen from Figure 4-14 (and similarly to the three previous dimensions analyzed), women have higher perceptions for service quality than men, for all items of the dimension of service policies. The minimum difference was found for P24 "store is easy to access and has good availability of parking spaces" (with a 0,10 mean difference), whereas the maximum difference was found for P17 "store offers interesting sales promotions and discounts" (with a 0,80 mean difference).

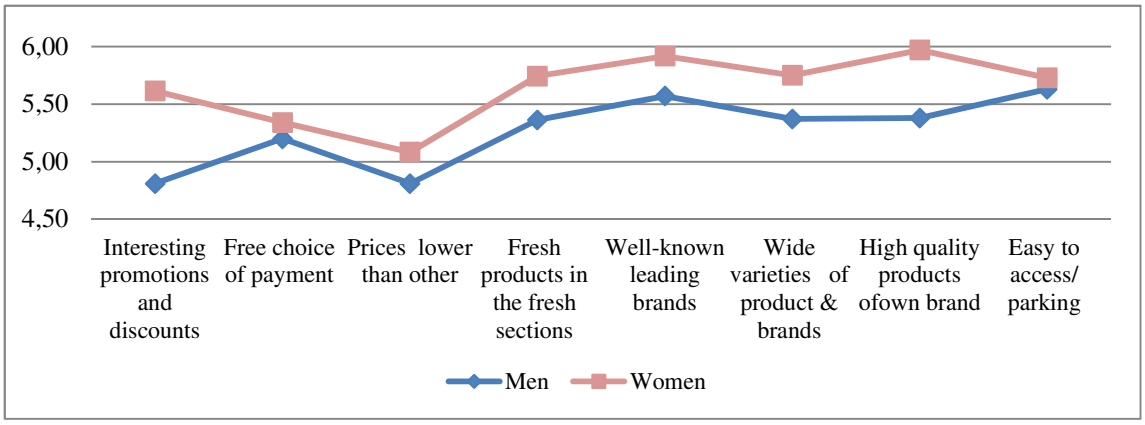

Figure 4-14. Customer's perceptions from policy dimension based on gender

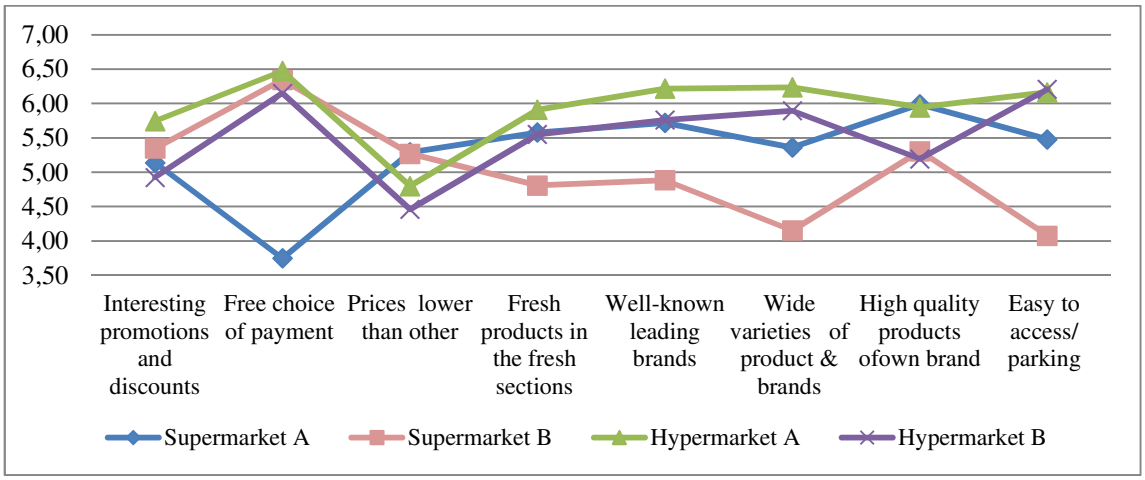

Figure 4-15. Customer's perceptions from policy dimension based on retail stores

As illustrated in Figure 4-15, and unlike what was observed for previous dimensions, there is no retail store for which all items of the policy dimension are higher than other stores. Customers have higher service quality perceptions for the policy dimension for hypermarket for all the five items. In Table 4-8 and Figure 4-16, we can see that contrary to the previous dimensions where hypermarkets were perceived as providing higher service quality than supermarkets, in this dimension of service policies customers reported that two items in supermarkets were better than in hypermarkets: P19 "store has product prices which are lower than in similar establishments" and P23 "store offers high quality products from its own brand" (with mean differences of 0.67 and 0.32, respectively).

Considering all dimensions, the strongest difference between supermarkets and hypermarkets, as we had anticipated, belongs to item P18 "store offers customer free choice of alternatives for payment (e.g., in cash, via store card, credit card, etc.)" (with a difference of 2,01 in the mean perceived value). As we expected, customers are quite unhappy with the freedom of choices offered for payment in supermarkets as compared to hypermarkets. This is certainly related to the fact that one of the supermarkets addressed by customer in this study had introduced recent changes in the payment methods policy. Formerly clients were offered the freedom to choose any means of payment (i.e. either with a credit card or in cash) regardless of the amount of their purchase. However, in the new payment policy recently specified, clients were forced by the supermarket to pay in cash for purchases under 20 €, whereas but they can still choose to pay by credit card or cash when they purchase more than 20 €.

Table 4-8. Customer's perceptions from personal interaction dimension based on retail format

Store Type		*Interesting promotions & discounts*	*Free choice of payment*	*Prices lower than other*	*Fresh products in the fresh sections*	*Well-known leading brands*	*Wide varieties of product & brands*	*High quality products of own brand*	*Easy to access/ parking*
Supermarket	Mean	5,18	4,29	5,29	5,42	5,55	5,11	5,85	5,19
	N	126	126	126	126	126	126	126	126
	Std. Deviation	1,286	2,150	1,295	1,242	1,211	1,449	1,173	1,548
Hypermarket	Mean	5,30	6,30	4,61	5,71	5,97	6,05	5,53	6,19
	N	122	122	122	122	122	122	122	122
	Std. Deviation	1,377	1,073	1,326	,975	1,105	1,059	1,433	1,116
Total	Mean	5,24	5,27	4,96	5,56	5,75	5,57	5,69	5,68
	N	248	248	248	248	248	248	248	248
	Std. Deviation	1,330	1,979	1,351	1,126	1,177	1,354	1,314	1,440

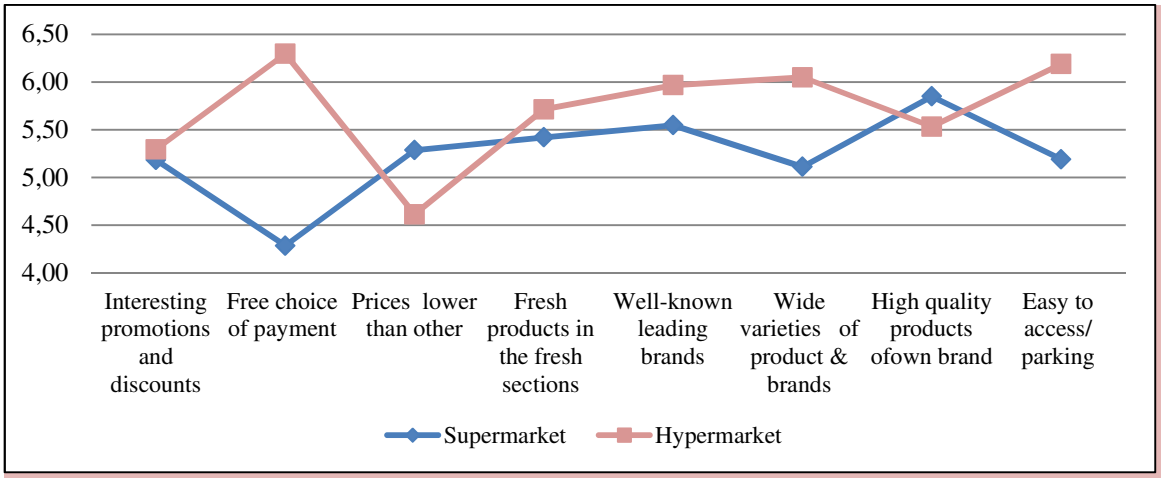

Figure 4-16. Customer's perceptions from personal interaction dimension based on retail format

In summary, according to respondents, the most important item is E20 "freshness and quality of products offered in the fresh sections (e.g., fish, fruit, etc.)" (with a mean value of 6,54), while the least important item is E2 "visual attractiveness of publicity leaflets and other materials related to the service, such as shopping bags, catalogs, etc." (with a mean value of 4,71). Moreover, comparing the expectation for items, for each of the four retail quality dimensions considered, suggests the most important aspects are related to the dimension of reliability, followed by: personal interaction, policies, and physical aspects, respectively.

According to respondents, customers are most satisfied with P21 "offer of products from well-known and leading brands in the market" (with a mean perception value of 5,75), and they are more satisfied with supermarkets than hypermarkets. On the other extreme, customers are least satisfied with P7 "short waiting time at cash registers" (with a mean perception value of 4,52) and the dissatisfaction occurs more in supermarkets than in hypermarkets.

4.2 GAP Analysis

In order to determine existing gaps between perceived service quality and customers' expectations, four bar charts are presented for each dimension. As we can see from Table 4-9 and Figure 4-17, although the biggest gap belongs to hypermarkets for item in P4 "store layout and organization enables customers to easily find the products they need", in general, hypermarkets provided better service quality for the physical aspects dimension, in comparison to supermarkets. Two positive gaps were found for hypermarkets service, namely for item P1 "store offers modern and attractive facilities, equipment and fixtures", and for P2 "publicity leaflets and other materials related to the

service (such as shopping bags, catalogs, etc.) are visually attractive". This means that stores performed well for these two items, as customers expressed higher perceptions than expectations.

The strongest difference for physical aspects, across retail store formats belongs to item P1 "store offers modern and attractive facilities, equipment and fixtures" which is positive for hypermarkets and negative for supermarkets. P2 "publicity leaflets and other materials related to the service (such as shopping bags, catalogs, etc.) are visually attractive" has a positive gap in both retail formats, whereas hypermarkets still performed better than supermarkets.

Table 4-9. Physical aspect dimension's gap between supermarket and hypermarket

		Expectations Means		***Perception Means***		***Gap***	
		Supermarket	Hypermarket	Supermarket	Hypermarket	Supermarket	Hypermarket
Physical aspects	Item 1	5,19	5,22	4,79	5,44	-,3968	,2213
	Item 2	4,78	4,65	4,80	4,94	,0238	,2951
	Item 3	6,29	6,52	5,44	5,83	-,8571	-,6885
	Item 4	6,05	6,34	5,23	5,42	-,8175	-,9180

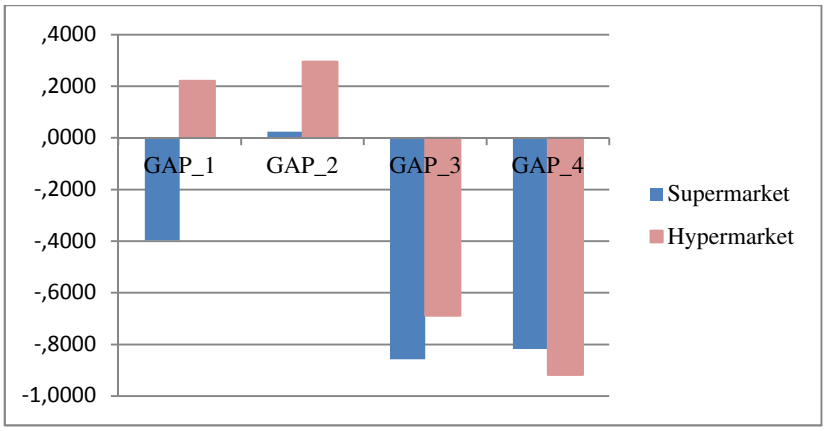

Figure 4-17. Physical aspect dimension's gap between supermarket and hypermarket

Table 4-10 and Figure 4-18 present the existing gaps between supermarkets and hypermarkets for the dimension of reliability. All items have negative gaps, for both retail formats. Generally, lower gaps were found for hypermarkets as compared to supermarkets, except for the following two items: P5 "prices are clearly indicated" and P8 "products on promotion or discount are easy to locate in the store".

The biggest gap was found for supermarkets for item P7 "waiting time at cash registers is short", whereas the smallest gap belongs to hypermarkets for item P6 "store gives appropriate and punctual information about sales promotions and discounts".

Table 4-10. Reliability dimension's gap between supermarket and hypermarket

		Expectations Means		***Perception Means***		***Gap***	
		Supermarket	Hypermarket	Supermarket	Hypermarket	Supermarket	Hypermarket
Reliability	Item 5	6,37	6,52	5,51	5,54	-,8651	-,9754
	Item 6	5,87	5,83	5,25	5,31	-,6111	-,5164
	Item 7	5,88	5,95	4,48	4,56	-1,4048	-1,3934
	Item 8	5,67	5,85	5,04	5,16	-,6270	-,6885
	Item 9	6,10	6,16	4,71	5,16	-1,3968	-1,0000
	Item 10	5,81	5,94	5,02	5,40	-,7937	-,5410
	Item 11	6,18	6,25	5,13	5,52	-1,0476	-,7295

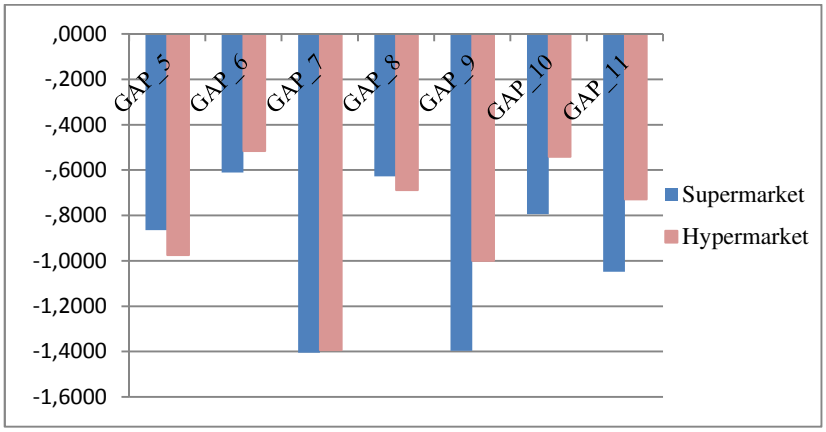

Figure 4-18. Reliability dimension's gap between supermarket and hypermarket

As we see from the Table 4-11 and Figure 4-19, although all of the items have negative gaps, hypermarkets still performed better than supermarkets, for all items that belong to the dimension of personal interaction. The biggest gap belongs to supermarkets for item P12 "store employees consistently show courtesy towards customers (e.g., cashiers, replenishment staff, etc.)", whereas the smallest gap belongs to hypermarkets for item P16 "store employees instill confidence in customers when assisting or advising them".

Table 4-11. Personal interaction dimension's gap between supermarket and hypermarket

		Expectations Means		***Perception Means***		***Gap***	
		Supermarket	Hypermarket	Supermarket	Hypermarket	Supermarket	Hypermarket
Personal interaction	Item 12	6,12	6,02	4,99	5,48	-1,1270	-,5410
	Item 13	6,03	5,89	5,03	5,52	-1,0000	-,3607
	Item 14	5,62	5,80	5,06	5,30	-,5635	-,4918
	Item 15	5,87	5,78	4,96	5,28	-,9127	-,5000
	Item 16	5,58	5,58	5,03	5,35	-,5476	-,2295

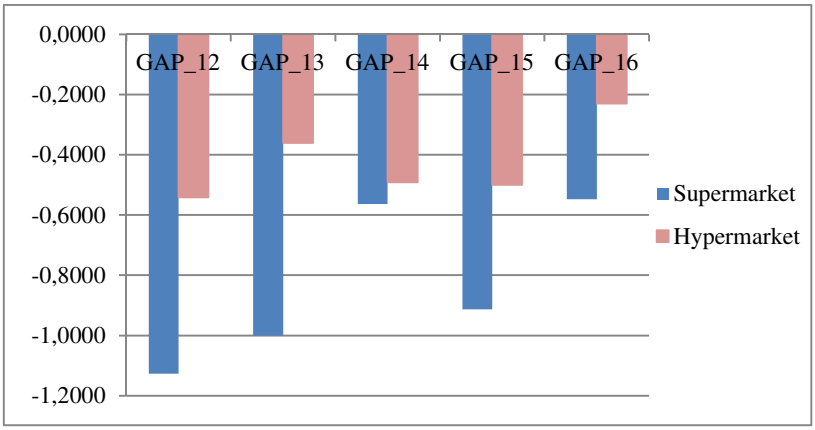

Figure 4-19. Personal interaction dimension's gap between supermarket and hypermarket

Table 4-12 and Figure 4-20 display the policy dimension's gaps for supermarkets and hypermarkets. This dimension has some positive gaps similarly to what was found for the dimension of physical aspects. For supermarkets and hypermarkets two and five positive gaps were found, respectively. The biggest gap belongs to supermarkets and it occurs for item P18 "store offers customer free choice of alternatives for payment (e.g., in cash, via store card, credit card, etc.)", while this gap is positive for hypermarkets. The lowest gap belongs to hypermarkets and it occurs for item P21 "store offers products from well-known and leading brands in the market". This item has a positive gap in supermarket as well.

Table 4-12. Policy dimension's gap between supermarket and hypermarket

		Expectations Means		***Perception Means***		***Gap***	
		Supermarket	Hypermarket	Supermarket	Hypermarket	Supermarket	Hypermarket
policy	Item 17	5,60	5,55	5,18	5,30	-,4127	-,2541
	Item 18	5,92	5,96	4,29	6,30	-1,6349	,3361
	Item 19	6,03	6,02	5,29	4,61	-,7460	-1,4016
	Item 20	6,52	6,56	5,42	5,71	-1,1032	-,8443
	Item 21	5,10	5,31	5,55	5,97	,4524	,6557
	Item 22	5,56	5,82	5,11	6,05	-,4444	,2295
	Item 23	5,83	5,46	5,85	5,53	,0238	,0738
	Item 24	5,62	5,75	5,19	6,19	-,4286	,4344

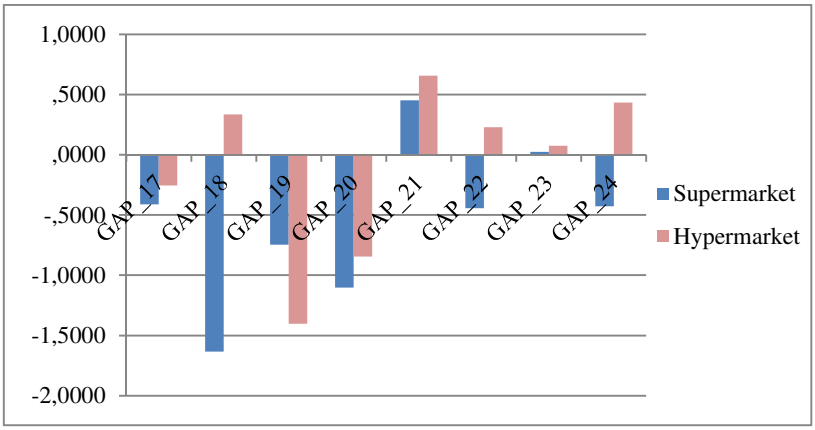

Figure 4-20. Policy dimension's gap between supermarket and hypermarket

In general, the biggest gap was found for item 7 "short waiting time at cash registers", which is stronger for supermarkets than for hypermarkets. In contrast, the smallest gap concerns item 20 "freshness and quality of products offered in the fresh sections (e.g., fish, fruit, etc.), which is bigger for supermarkets than for hypermarkets. An interesting result is that item P20 "freshness and quality of products offered in the fresh sections (e.g., fish, fruit, etc.)" is the most important item to customers and also the item which possesses the smallest gap. Thus, it seems that the customers choose their favorite store mostly based on P20 "freshness and quality of products offered in the fresh sections (e.g., fish, fruit, etc.)".

Figure 4-21 allows for a comparison for the mean value service quality perceptions for supermarkets and hypermarkets. The dimension with higher perceived service quality was policies, followed by physical aspects, personal interactions, and reliability, respectively. Moreover, this pattern is similar for supermarkets and hypermarkets, neglecting the small difference for reliability and personal interaction in the supermarkets case. Finally, the biggest difference between supermarkets and hypermarkets belongs to the dimension of policies, whereas the smallest difference belongs to the dimension of reliability. This suggests that hypermarkets are doing better, in the eyes of the customers, in terms of policies, whereas supermarkets offer competitive service in terms of reliability.

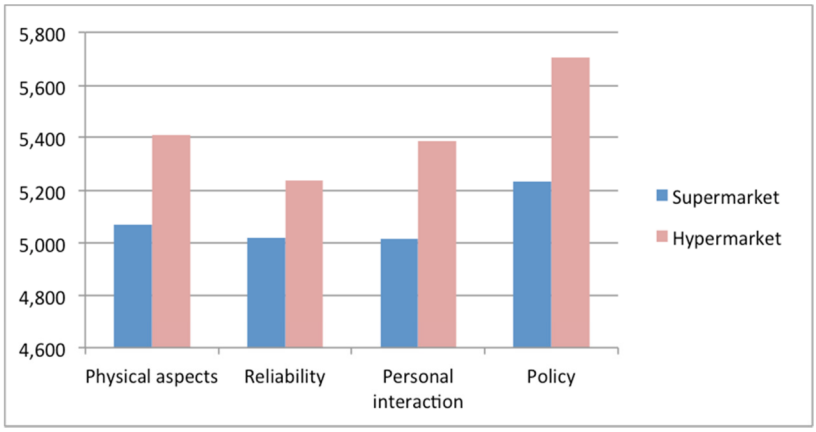

Figure 4-21. Comparing mean values of the perceived service quality in supermarkets and hypermarkets

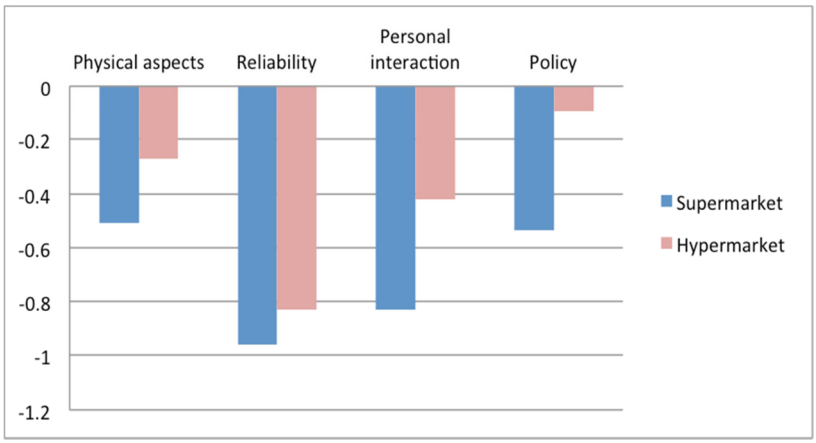

Figure 4-22. Comparing the existing service quality gaps in supermarkets and hypermarkets

Figure 4-22 shows the existing gaps between customers' expectations and perceptions for the four retail service quality dimensions. We observe negative gaps (showing dissatisfaction) for all dimensions. As seen from the figure, customers are more dissatisfied with supermarkets than with hypermarkets. Generally, they are more dissatisfied with reliability aspects and personal interactions issues for both types of stores. The biggest gap belongs to the reliability dimension. Moreover, among reliability items, the most displeased item for customers is the waiting time at cash register. Furthermore, customers perceive higher service quality for hypermarkets than for supermarkets for all addressed items, except for two of them, namely "P23. Offer of products from the retailers' own brand with high quality" and "P19. Offer of product prices which are lower than in similar establishments".

As we expected, customers are quite unhappy with free choice of payment in supermarkets comparing to hypermarkets. This refers to the payment method policy that has changed recently in one of the major supermarket chains in the studied region. In former payment method, the clients were able to pay any amount of their purchase by their own choice (either with a credit card or in

cash). However, in the new payment method, the clients have to pay in cash if they purchase less than 20 €, but they can still pay by credit card when they purchase more than 20 €.

4.3 T-tests for differences across retail store formats

T-tests were performed to investigate the existence of significant differences in customer service quality evaluations across gender and retail formats (i.e., supermarket and hypermarket settings). Respondents were classified in two different gender groups (male = 1, female = 2). In order to investigate that if there were any significant differences between respondent's expectations of service quality across gender the following statistical hypothesis were defined:

H_0: $\mu_1 = \mu_2$

H_1: $\mu_1 \neq \mu_2$

H_0: Respondent's expectations of service quality are equal between men and women.

H_1: Respondent's expectations of service quality are not equal between men and women.

According to Table 4-13, the outcome from T-tests revealed that there is a significant difference between service quality expectations of men and women for the dimension of "personal interaction" (Sig. 0,020), so H_0 is rejected only for personal interaction dimension, and H_0 is not rejected for the other remaining dimensions. This means that no significant differences were found between men and women for physical aspects, reliability, and policy dimensions.

Table 4-13. T-test of customers' expectations of service quality and gender

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Physical Aspects	Equal variances assumed	,996	,319	-1,301	246	,195	-,13120	,10088	-,32990	,06749
	Equal variances not assumed			-1,312	245,976	,191	-,13120	,09997	-,32812	,06571
Reliability	Equal variances assumed	1,845	,176	-,736	246	,463	-,07169	,09746	-,26364	,12027
	Equal variances not assumed			-,743	245,714	,458	-,07169	,09644	-,26164	,11826
Personal Interaction	Equal variances assumed	,298	,586	-2,340	246	,020	-,26834	,11466	-,49417	-,04251
	Equal variances not assumed			-2,344	243,264	,020	-,26834	,11448	-,49383	-,04284
Policies	Equal variances assumed	,022	,883	-1,516	246	,131	-,15618	,10303	-,35912	,04675
	Equal variances not assumed			-1,518	243,029	,130	-,15618	,10290	-,35888	,04651

Table 4-14 presents the T-tests results for respondent's perceptions for service quality across gender. The following hypotheses were defined to explore if there is any significant difference between the service quality perceptions of men and women:

H_0: $\mu_1 = \mu_2$

H_1: $\mu_1 \neq \mu_2$

H_0: Perceptions of service quality are equal between men and women.

H_1: Perceptions of service quality are not equal between men and women.

Significant differences were found for men and women perceptions for all service quality dimensions. So H_0 is rejected for all dimensions. Therefore, although T-tests supported the existence of significant differences between the expectations of male and female only for the "Personal Interaction" dimension, regarding customer's perceptions, significant differences existed for all dimensions, considering significance level of 10% – significant differences existed only for "reliability" and "policies" dimensions for significance level of 5%.

Table 4-14. T-test of customers' perceptions of service quality and gender

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Physical Aspects	Equal variances assumed	1,073	,301	-1,870	246	,063	-,21669	,11590	-,44498	,01160
	Equal variances not assumed			-1,885	245,992	,061	-,21669	,11498	-,44316	,00978
Reliability	Equal variances assumed	,000	1,000	-2,453	246	,015	-,29131	,11876	-,52522	-,05740
	Equal variances not assumed			-2,470	245,843	,014	-,29131	,11796	-,52365	-,05897
Personal Interaction	Equal variances assumed	2,059	,153	-1,803	246	,073	-,25287	,14025	-,52912	,02338
	Equal variances not assumed			-1,821	245,791	,070	-,25287	,13883	-,52632	,02057
Policies	Equal variances assumed	1,636	,202	-3,403	246	,001	-,37683	,11072	-,59492	-,15874
	Equal variances not assumed			-3,401	241,366	,001	-,37683	,11079	-,59506	-,15860

In order to explore the existence of significant differences in customer service quality evaluations across retail store formats (i.e. between supermarkets and hypermarkets), the retail stores were categorized in two different groups (supermarket = 1, hypermarket = 2). The following hypotheses were defined to examine if there were significant differences between respondent's expectations for service quality for supermarkets and hypermarkets:

H_0: $\mu_1 = \mu_2$

H_1: $\mu_1 \neq \mu_2$

H_0: Respondent's expectations of service quality for the considered item are equal between supermarket and hypermarket.

H_1: Respondent's expectations of service quality for the considered item are not equal between supermarket and hypermarket.

Above hypotheses have been considered for each of the 24 items of the study. Table 4-15 shows the T-test results for all items. According to this table, only for three items H_0 was rejected, namely for: E3 "cleanliness of the store and available support services (e.g., w c, safe-boxes, etc.)", E4 "store layout and organization enabling customers to easily find the products they need", and E23 "offer of products from the retailers' own brand with high quality". The rest 21 items rejected H_1. Therefore, respondent's expectations of service quality are equal for supermarket and hypermarket except for three abovementioned items, namely E3, E4, and E23.

Table 4-15. T-test for customers' expectations of service quality between supermarket and hypermarket

Service Quality Dimension	*Item*	*Characteristic*	*Hypotheses*	*Sig. (2-tailed)*	*Accept*
Ph. A.	1	Modernity and attractiveness of store facilities, equipment and fixtures.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,822 H ,822	H_0
	2	Visual attractiveness of publicity leaflets and other materials related to the service, such as shopping bags, catalogs, etc.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,453 H ,454	H_0
	3	Cleanliness of the store and available support services (e.g., w c, safe-boxes, etc.).	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,071 H ,071	H_1
	4	Store layout and organization enabling customers to easily find the products they need.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,027 H ,027	H_1
Re.	5	Clear indication of product prices.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,229 H ,230	H_0
	6	Appropriate and punctual information about sales promotions and discounts.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,812 H ,813	H_0
	7	Short waiting time at cash registers.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,622 H ,622	H_0
	8	Easy location of products on promotion or discount.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,211 H ,212	H_0
P.I.	9	Employees showing great interest and motivation to resolve any difficulties or customer problems.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,656 H ,656	H_0
	10	Stock availability of products/brands desired by customers.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,342 H ,343	H_0
	11	Guarantees of product quality and possibility of returns.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,557 H ,557	H_0
	12	All employees consistently showing courtesy towards customers (e.g., cashiers, replenishment staff, etc.).	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,514 H ,516	H_0
	13	All employees consistently willing to help customers (e.g., cashiers, replenishment staff, etc.).	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,288 H ,290	H_0
	14	Employees showing enough knowledge to assist and advise customers in the fresh sections (e.g., fish, fruits, etc.)	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,243 H ,243	H_0
	15	Employees having enough knowledge to assist customers in difficulties and questions.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,507 H ,508	H_0
	16	Employees instilling confidence in customers when assisting or advising them.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,987 H ,987	H_0
Po.	17	Offer of interesting sales promotions and discounts.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,762 H ,762	H_0
	18	Offer of free choice of alternatives for payment (e.g., in cash, via store card, credit card, etc.)	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,811 H ,812	H_0
	19	Offer of product prices which are lower than in similar establishments.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,918 H ,918	H_0
	20	Freshness and quality of products offered in the fresh sections (e.g., fish, fruit, etc.)	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,773 H ,773	H_0
	21	Offer of products from well-known and leading brands in the market.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,187 H ,187	H_0
	22	Offer of a wide assortment of product brands and varieties.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,106 H ,107	H_0
	23	Offer of products from the retailers' own brand with high quality.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,027 H ,028	H_1
	24	Ease of access to the store and availability of parking spaces.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S ,397 H ,397	H_0

Table 4-16 shows the T-tests results for differences in customers' expectations regarding each service quality dimension and for each store format. The following hypotheses were defined.

H_0: $\mu_1 = \mu_2$

H_1: $\mu_1 \neq \mu_2$

H_0: Respondent's expectations of service quality for the considered dimension are equal between supermarket and hypermarket.
H_1: Respondent's expectations of service quality for the considered dimension are not equal between supermarket and hypermarket.

The table reveals that H_0 is not rejected for four service quality dimensions which means that no significant differences were found between respondent's expectations of service quality across users of supermarkets and hypermarkets. This result is aligned with our observation in the pilot study which convinced us to modify the questionnaire and merging the expectation parts for different retail formats.

Table 4-16. T-test of customers' expectations of service quality and store format

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Physical Aspects	Equal variances assumed	,221	,639	-1,021	246	,308	-,10295	,10081	-,30151	,09562
	Equal variances not assumed			-1,020	243,287	,309	-,10295	,10093	-,30176	,09586
Reliability	Equal variances assumed	,020	,888	-,922	246	,358	-,08961	,09720	-,28107	,10185
	Equal variances not assumed			-,920	239,652	,359	-,08961	,09741	-,28150	,10228
Personal Interaction	Equal variances assumed	1,274	,260	,271	246	,787	,03133	,11568	-,19652	,25918
	Equal variances not assumed			,270	229,743	,788	,03133	,11612	-,19747	,26013
Policies	Equal variances assumed	1,681	,196	-,314	246	,754	-,03245	,10329	-,23589	,17100
	Equal variances not assumed			-,313	232,504	,755	-,03245	,10364	-,23664	,17175

In order to investigate is the existence of any significant difference between respondent's perceptions of service quality across users of different retail store formats, the following statistical hypotheses were considered:

H_0: $\mu_1 = \mu_2$

H_1: $\mu_1 \neq \mu_2$

H_0: Respondent's perceptions of service quality for the considered item are equal for supermarket and hypermarket.
H_1: Respondent's perceptions of service quality for the considered item are not equal for supermarket and hypermarket.

The above hypotheses have been considered for each of the 24 items of the study. Table 4-17 shows the T-test results for all items by considering the above hypothesis for each of them. Results from this table reveal that H_0 is rejected for 16 items, among them 15 items (P1, P3, P9, P10, P11, P12, P13, P15, P16, P18, P19, P20, P21, P22, P24) with significance level of less than 0,05, and one item (i.e., P23) with significance level of 0,058.

Due to the significance level of the test 0.05, H_0 is rejected for 15 items. Therefore, at the confidence level of 95%, we can say that there is a significant difference between the customers' perceptions of supermarket and hypermarket for the 15 abovementioned items.

Table 4-17. T-test of customers' perceptions of service quality and store format

Service Quality Dimension	*Item*	*Characteristic*	*Hypotheses*	*Sig. (2-tailed)*		*Accept*
Ph. A.	1	The store offers modern and attractive facilities, equipment and fixtures.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,000 ,000	H_1
	2	The publicity leaflets and other materials related to the service (such as shopping bags, catalogs, etc.) are visually attractive.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,393 ,394	H_0
	3	The store and available support services (e.g., w c, safe-boxes, etc.) are adequately clean.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,005 ,005	H_1
Re.	4	The store layout and organization enables customers to easily find the products they need.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,229 ,229	H_0
	5	Prices are clearly indicated.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,833 ,834	H_0
	6	The store gives appropriate and punctual information about sales promotions and discounts.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,712 ,713	H_0
	7	The waiting time at cash registers is short.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,674 ,673	H_0
	8	The products on promotion or discount are easy to locate in the store.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,463 ,464	H_0
P.I.	9	The store employees show great interest and motivation to resolve any difficulties or customer problems.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,008 ,008	H_1
	10	The products/brands desired by customers are always available.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,027 ,027	H_1
	11	The store guarantees the quality of the products and offers the possibility of returns.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,018 ,018	H_1
	12	All store employees consistently show courtesy towards customers (e.g., cashiers, replenishment staff, etc.).	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,002 ,002	H_1
	13	All store employees are consistently willing to help customers (e.g., cashiers, replenishment staff, etc.).	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,003 ,003	H_1
	14	Store employees show enough knowledge to assist and advise customers in the fresh sections (e.g., fish, fruits, etc.)	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,128 ,128	H_0
	15	Store employees in general have enough knowledge to assist customers in difficulties and questions.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,034 ,034	H_1
	16	Store employees instill confidence in customers when assisting or advising them.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,037 ,037	H_1
	17	The store offers interesting sales promotions and discounts.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,506 ,507	H_0
Po.	18	The store offers customer free choice of alternatives for payment (e.g., in cash, via store card, credit card, etc.)	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,000 ,000	H_1
	19	The store has product prices which are lower than in similar establishments.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,000 ,000	H_1
	20	The store offers fresh and quality of products in the fresh sections (e.g., fish, fruit, etc.)	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,041 ,040	H_1
	21	The store offers products from well-known and leading brands in the market.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,005 ,005	H_1
	22	The store offers a wide assortment of product brands and varieties.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,000 ,000	H_1
	23	The store offers high quality products from its own brand.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,058 ,059	H_1
	24	The store is easy to access to the store and has good availability of parking spaces.	H_0: $\mu_1 = \mu_2$ H_1: $\mu_1 \neq \mu_2$	S H	,000 ,000	H_1

As seen from Table 4-18, although no significant differences were found between customer expectations for service quality dimensions across retail types (i.e., supermarkets and hypermarkets), according to the following hypothesis test, there is a significant difference between the dimensions of service quality perceptions from supermarket and hypermarket.

H_0: $\mu_1 = \mu_2$

H_1: $\mu_1 \neq \mu_2$

H_0: Respondent's perceptions of service quality for the considered dimension are equal for supermarket and hypermarket.

H_1: Respondent's perceptions of service quality for the considered dimension are not equal for supermarket and hypermarket.

Therefore, H_0 is rejected for all considered dimensions and significant differences were found for all service quality dimensions: "physical aspects" (Sig. 0,003), "reliability" (Sig. 0,068), "personal interaction" (Sig. 0,007), "policies" (Sig. 0,000).

Table 4-18. T-test of customers' perceptions of service quality and store format

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Physical Aspects	Equal variances assumed	1,722	,191	-2,991	246	,003	-,34231	,11443	-,56770	-,11692
	Equal variances not assumed			-2,996	245,261	,003	-,34231	,11427	-,56739	-,11723
Reliability	Equal variances assumed	,483	,488	-1,833	246	,068	-,21843	,11915	-,45312	,01626
	Equal variances not assumed			-1,830	241,932	,068	-,21843	,11934	-,45351	,01665
Personal Interaction	Equal variances assumed	,689	,407	-2,695	246	,008	-,37424	,13887	-,64776	-,10072
	Equal variances not assumed			-2,697	245,905	,007	-,37424	,13875	-,64753	-,10095
Policies	Equal variances assumed	3,268	,072	-4,339	246	,000	-,47284	,10899	-,68751	-,25817
	Equal variances not assumed			-4,343	245,760	,000	-,47284	,10887	-,68729	-,25839

In order to find any significant difference gap between customer's expectations and perceptions of service quality dimensions with regard to gender, the following hypotheses were defined:

H_0: $\mu_1 = \mu_2$

H_1: $\mu_1 \neq \mu_2$

H_0: Service quality gaps are equal between men and women for the considered dimension.

H_1: Service quality gaps are not equal between men and women for the considered dimension.

According to Table 4-19, results of T-test show that service quality dimensions' gap between men and women is significant only for the "policy" dimension (Sig. 0,057); therefore, no significant difference was found between men and women for the remaining service quality dimensions' gap and H_0 is not rejected for the rest of the dimensions.

Table 4-19. T-test of service quality gaps and gender

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
GAP_PH	Equal variances assumed	,089	,765	-,640	246	,523	-,08549	,13357	-,34857	,17759
	Equal variances not assumed			-,640	241,069	,523	-,08549	,13368	-,34882	,17784
GAP_RE	Equal variances assumed	,202	,653	-1,565	246	,119	-,21962	,14034	-,49605	,05680
	Equal variances not assumed			-1,566	242,479	,119	-,21962	,14026	-,49590	,05666
GAP_PI	Equal variances assumed	,502	,479	,101	246	,919	,01546	,15263	-,28516	,31609
	Equal variances not assumed			,101	236,339	,920	,01546	,15335	-,28665	,31758
GAP_PO	Equal variances assumed	6,508	,011	-1,910	246	,057	-,22064	,11550	-,44813	,00684
	Equal variances not assumed			-1,876	211,224	,062	-,22064	,11762	-,45251	,01122

In order to investigate for any significant difference gaps between customer's expectations and perceptions of service quality dimensions with regard to retail store format the following statistical hypothesis were defined:

H_0: $\mu_1 = \mu_2$

H_1: $\mu_1 \neq \mu_2$

H_0: There is no difference in service quality dimensions' gap between supermarket and hypermarket.

H_1: There is a difference in service quality dimensions' gap between supermarket and hypermarket.

As seen from Table 4-20, a significant difference was found for the service quality dimensions' gap across retail store format (supermarket and hypermarket) for "physical aspects" (Sig. 0,072), "reliability" (Sig. 0,007), and "policies" (Sig. 0,000). Therefore, H_0 is rejected for those three dimensions, and H_0 only is not rejected for the personal interaction gap.

Table 4-20. T-test of service quality dimensions' gaps for different store format

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
GAP_PH	Equal variances assumed	,056	,814	-1,806	246	,072	-,23936	,13254	-,50042	,02169
	Equal variances not assumed			-1,808	245,667	,072	-,23936	,13239	-,50013	,02140
GAP_RE	Equal variances assumed	,000	,983	-,917	246	,360	-,12882	,14052	-,40561	,14796
	Equal variances not assumed			-,916	243,992	,361	-,12882	,14066	-,40588	,14823
GAP_PI	Equal variances assumed	,927	,337	-2,702	246	,007	-,40557	,15012	-,70126	-,10987
	Equal variances not assumed			-2,704	245,808	,007	-,40557	,14998	-,70098	-,11016
GAP_PO	Equal variances assumed	,490	,485	-3,908	246	,000	-,44039	,11268	-,66233	-,21846
	Equal variances not assumed			-3,911	245,978	,000	-,44039	,11260	-,66218	-,21861

4.4 OLS

The next stage in the analysis had the objective of examining the relationships between the service process quality dimensions distinguished in the study, and customer satisfaction and intentions to re-use and recommend the service alternatives. We used OLS (Ordinary Least Squares) to estimate three regression models (as described in Table 4-21). In the estimated models, the variables "Overall satisfaction with the service", "Intentions to re-use the service" and "Intentions to recommend the service" were inputted as dependent. The computed values for the average perceptions for the dimensions of "physical aspects", "personal Interaction", "reliability" and Policies" were used as independent variables. The models included also the following two dummy variables: "Type of retail store" (supermarket = 1; hypermarket=2) and "Gender" (male =1; female=2). The estimated models are displayed in Table 4-21.

Table 4-21. Regression models estimated

Dependent variables		***Overall satisfaction with the service***	***Intentions to re-use the service***	***Intentions to recommend the service***
Independent variables				
Constant term	α1	0,601	2,006	1,253
D1, Type of retail store	α2	-0,126 (0,0232)	-0,351* (0,007)	-0,335* (0,026)
D2, Respondent's Gender	α 3	0,174 (0,093)	0,238 (0,061)	0,174 (0,240)
V1, Physical aspects	β1	0,163* (0,028)	0,029 (0,753)	0,077 (0,466)
V2, Reliability	β2	0,256* (0,002)	0,072 (0,482)	0,315* (0,009)
V3, Personal interaction	β3	0,089 (0,195)	0,366* (0,000)	0,192* (0,049)
V4, Policies	β4	0,423* (0,000)	0,254* (0,013)	0,263* (0,027)

R^2= 0,470

The estimation results suggest that customers' "Overall satisfaction with the service" was higher for supermarkets, and for female customers. The dimensions of "Policies" and "Reliability" revealed to have the stronger impact for customers' "Overall satisfaction with the service" - β4 = 0,423, (Sig. 0,000) and β2 = 0,256 (Sig. 0,002).

In what concerns customers' "Intentions to re-use the service", again the average values were higher in the case of supermarket and for female customers. The dimensions of "Personal Interaction" and "Policies" had the stronger impact for re-use intentions - β3 = 0,366 (Sig. 0,000) and β4 = 0,254 (Sig. 0,013).

For customers' "Intentions to recommend the service" the average values were also higher in the case of supermarket and for female customers, and the dimensions with stronger impact were "Reliability" and "Policies" - β2 – 0,315 (Sig. 0,009); β4 – 0,263 (Sig. 0,027).

Overall the results suggest that "Reliability" and "Policies" are key managerial variables, as these dimensions showed strong impacts for customer satisfaction, and for customer recommendations. The aspects related to the quality of "Personal Interaction" provided to the customers seem to play a key role for the strengthening of customer loyalty to the retail store.

We also investigated if the impact of the quality dimensions considered for customer satisfaction was different across store type. For that purpose we estimated a new regression model for the dependent variable "Overall satisfaction with the service", including the dummy variable D1 for "Store Type" and the following interaction terms D1*V1, D1*V2, D1*V3 and D1*V4 (see Table 4-22)

Table 4-22. Regression models estimated

Dependent variable ***Overall satisfaction with the service***		
Independent variables	*Estimation coefficients*	
Constant term	α1	-0,138
D1, Type of retail store	α2	0,404 (0,577)
V1, Physical aspects	β1	0,163 (0,487)
V2, Reliability	β2	0,894* (0,004)
V3, Personal interaction	β3	-0,502* (0,033)
V4, Policies	β4	0,573* (0,027)
V1 D1, Interaction between retail format and V1	β5	0,002 (0,987)
V2 D1, Interaction between retail format and V2	β6	-0,369* (0,039)
V3 D1, Interaction between retail format and V3	β7	0,363* (0,011)
V4 D1, Interaction between retail format and V4	β8	-0,100 (0,544)
R^2 = 0,477		

We found a significant and negative coefficient for the variable V2D1, i.e. the interaction between store type and the dimension of "Reliability", suggesting that improvements in customer perceptions about "Reliability" will result in a stronger impact for "Overall satisfaction with the service" in supermarket stores, as compared to hypermarkets. The coefficient for the variable V3D1 was also significant, but positive, suggesting that improvements in the perceptions for aspects related to "Personal interaction" result in a stronger impact on "Overall satisfaction with the service" for hypermarkets relatively to supermarkets.

4.5 Expectation-perception analysis

Similar to Vásquez et al. (2001), an importance-performance analysis was also conducted to figure out the weaknesses and strengths of the target retail formats in satisfying different dimensions of their offered service. This analysis serves as a guideline for formulating effective strategies to improve the competitive strength of the target retail stores. The expectation of the clients reflects the importance of the attributes on which they base their evaluation, while their perception reflects the service quality they are offered by the retail store for those attributes. In Vazquez et al. (2001) the expectations and perceptions are classified into low, moderate, and high values in a way that their combination form four different zones as illustrated by Figure 4-23.

1. Competitive vulnerability (important dimensions with low perceptions)
2. Competitive strength (high perceptions in important dimensions)
3. Irrelevant superiority (high perceptions in dimensions which are not very important)
4. Relative indifference (low scores in dimensions that are not very important)

We can suggest the most appropriate strategy for each attribute according to their situation in this matrix. The items in the first quadrant (competitive vulnerability) are those which require greater efforts from the company than those in the second quadrant (competitive strength) to boost the customer satisfaction. For those appearing in the third quadrant (irrelevant superiority) channeling resources must be considered, assigning them to other activities of greater importance. Finally, those in the fourth quadrant (relative indifference) are attributes which do not require immediate attention.

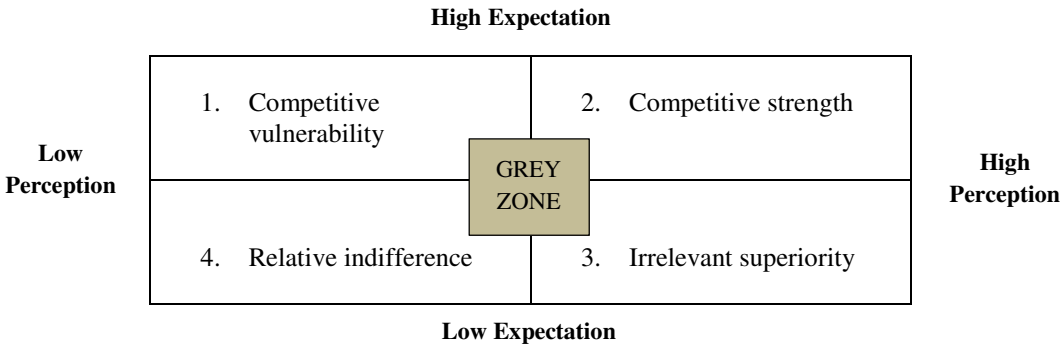

Figure 4-23. Importance-performance matrix (Vázquez et al., 2001)

In this study, to place the expectation and perceptions expressed by respondents for the four service quality dimensions considered, the average expectations of each of the four retail service quality

dimensions were calculated and were then compared with the average expectation of all the dimensions. The dimensions which had significantly higher averages than the overall mean were placed above/right the axis lines which represented the overall mean values, whereas those with averages lower than the average values were placed below/left the axis. A similar procedure is repeated for the perception values of all four retail quality dimensions.

Figure 4-24 shows the result of importance-performance analysis for both retail formats. In this graph the vertical axis represents the values for expectations (with an average value of 5,8177), and the horizontal axis represents the values for perceptions (with an average value of 5.2564). The points plotted in the graph correspond to the average values for each dimension (e.g. physical aspects, reliability, etc.), both for expectations and perceptions. After plotting these values on the graph, we also tested for "significance" of the difference between the average value for each dimension and the total mean values considered in the axis. We conducted t-tests to assess the differences between the average value for each dimension and the total mean value for expectations, as well as for perceptions.

In general, as seen from the figure, customers perceived higher service quality from hypermarkets comparing to supermarkets under all four dimensions. As observed, the highest perceived quality corresponds to policy dimension for both of the retail formats. On the other hand, for both retail formats, reliability and physical aspects are the most and the least important dimensions, respectively.

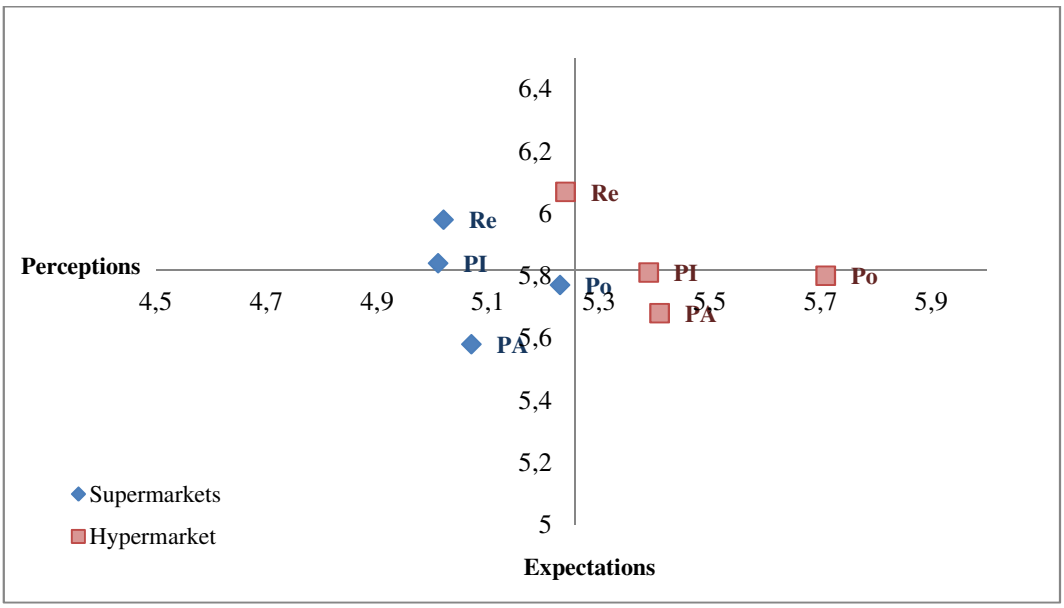

Figure 4-24. Importance - Performance Analysis (supermarkets and hypermarkets vs. total average)

Moreover, as seen from the figure, reliability dimension proved to be very important for the clients (T-test confirms significant difference of reliability dimension in formats, supermarkets and hypermarkets). As per perceptions, three dimensions appeared with high value (policy, personal interaction, and physical aspect) just in hypermarkets. However, for the supermarket, there is no quality dimension in the above average perception region (i.e., the right half plane).

According to this analysis, although three dimensions of hypermarkets are on bounds of the second quadrant, there is not any distinctive dimension in competitive strength area. Interestingly, the result for supermarkets appear in left half (first and forth quadrants), and hypermarkets' results placed in right half (second and third quadrants).

According to this analysis, the dimensions requiring more immediate attention by the supermarket will be those concerning reliability and physical aspects as they placed in competitive vulnerability and relative indifference area, respectively. Surprisingly, physical aspect dimension in hypermarkets is improved adequately as it appeared in irrelevant superiority, and the company must consider channeling resources, allocating them to other activities of greater importance.

None of the retail formats has any service quality dimension in the competitive strength zone.

Table 4-23 and Table 4-24 present the results for the T-test of expectations and perceptions, respectively. Average Value for Expectations (all dimensions) = 5,8177

Table 4-23. T-test for expectations (Supermarket and Hypermarket)

Expectation	***Supermarket***		***Hypermarket***	
Dimension	*T-test*	*Interval for* $\mu_{Dimension} - \mu_{GlobalExp.}$	*T-test*	*Interval for* $\mu_{Dimension} - \mu_{GlobalExp.}$
Physical Aspects	(0,001)	]-0,3564, -0,0254[	(0,068)	]-0,2848, 0,0101[
Reliability	(0,011)	]0,0394, 0,2912[	(0,001)	]0,1089, 0,4009[
Personal Interaction	(0,708)	]-0,1140, 0,1675[	(0,960)	]-0,1863, 0,1771[
Policy	(0,469)	]-0,1746, 0,0808[	(0,859)	]-0,1750, 0,1461[

- ✓ We only found significant differences between the expectations of supermarkets and the total average expectation for physical aspects and reliability dimensions.
- ✓ We find significant differences between the expectations of hypermarkets and total average expectation for reliability.

Table 4-24. T-test for perceptions (Supermarket and Hypermarket)

Perception	***Supermarket***		***Hypermarket***	
Dimension	*T-test*	*Interval for* $\mu_{Dimension} - \mu_{GlobalPer.}$	*T-test*	*Interval for* $\mu_{Dimension} - \mu_{GlobalPer.}$
Physical Aspects	(0,024)	]-0,3564, -0,0254[	(0,054)	]-0,0028, 0,3056[
Reliability	(0,003)	]-0,3944, -0,0799[	(0,834)	]-0,1950, 0,1576[
Personal Interaction	(0,017)	]-0,4397, -0,0445[	(0,173)	]-0,0586, 0,3228[
Policy	(0,778)	]-0,1782, 0,1337[	(0,000)	]0,3018, 0,5993[

- ✓ We find significant differences between the perceptions of supermarkets and total perception for physical aspects, Reliability, and personal interaction dimensions.
- ✓ We find significant differences between the perceptions of hypermarkets and total perception for policy dimension.

Following figures present each of retail formats separately. As Figure 4-25 shows respondents expressed that they received higher service quality from supermarket A comparing supermarket B. And Figure 4-26 shows that respondents received higher service quality from hypermarket A than hypermarket B.

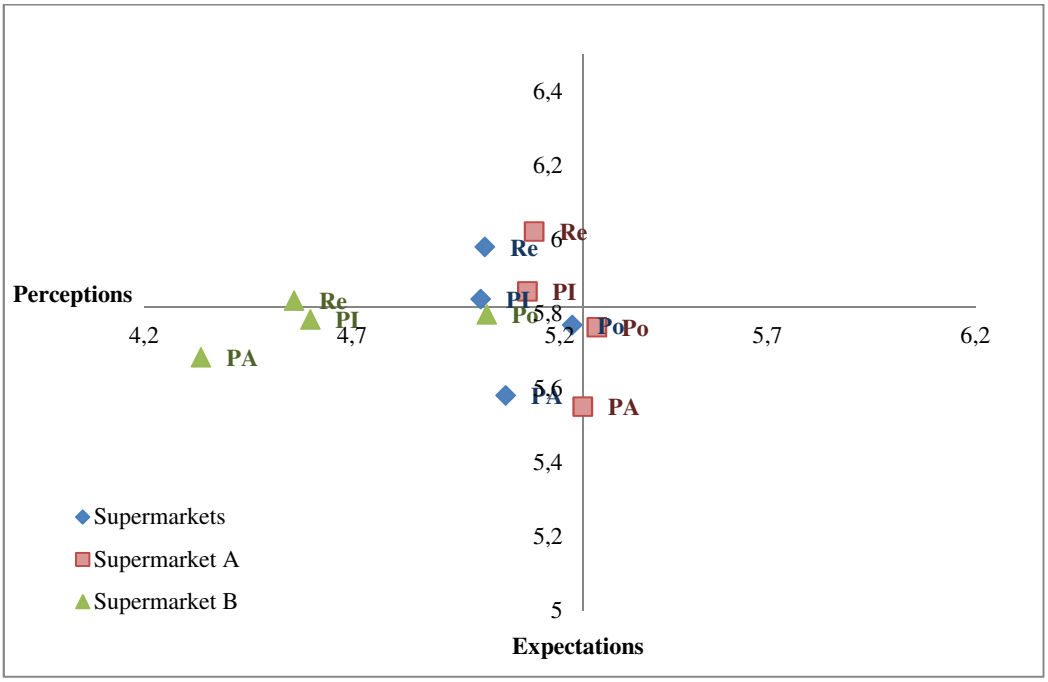

Figure 4-25. Importance - Performance Analysis for Supermarkets
(Supermarket A and Supermarket B vs. Supermarkets average)

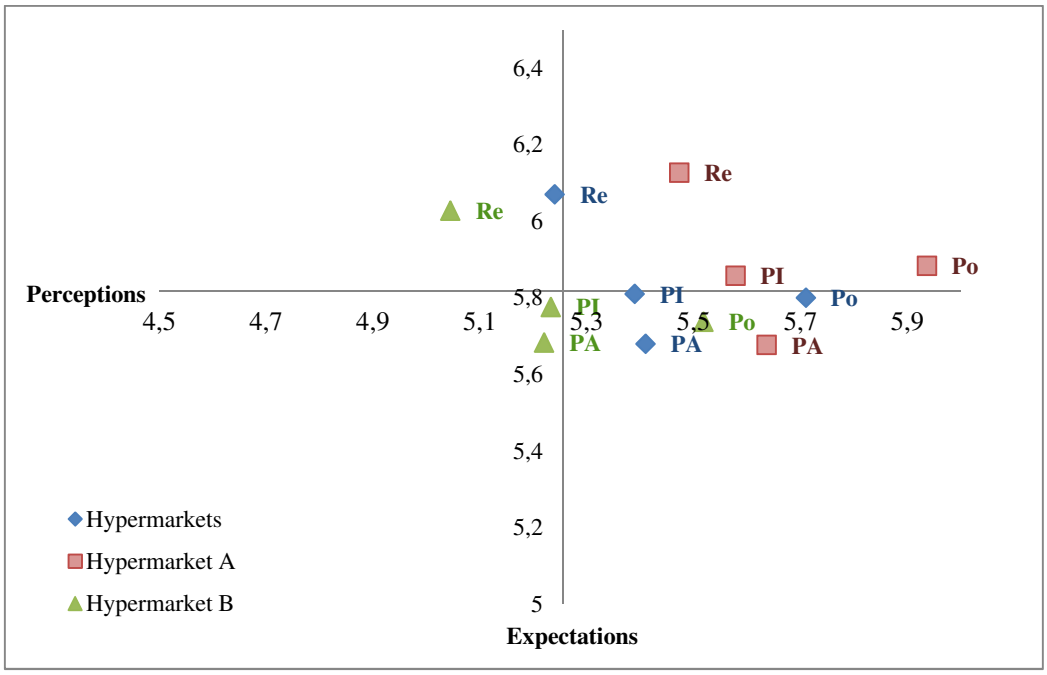

Figure 4-26. Importance - Performance Analysis for Hypermarkets
(Hypermarket A and Hypermarket B vs. hypermarkets average)

Chapter 5

CONCLUSION

In this chapter a brief overview of this study is provided, highlighting the main conclusions, the research limitations and future research prospects. Finally, the chapter concludes with some research implications.

The purpose of this study was to investigate the differences in service quality across two distinct retail formats, namely supermarkets and hypermarkets. Regarding the objectives of the work and the literature reviewed, a questionnaire based on RSQS scale was adopted as a tool for data collection from retail customers.

As the scope of this work was beyond scale validation and extension, the project work builds on the proposed measurement scale of Vazquez et al. (2001) to conduct a survey about customers' quality perception for Portuguese supermarkets and hypermarkets services. The work also setup for exploring the importance of distinct service quality dimensions – physical aspects, personal interactions, reliability and policies (Dabholkar et al., 1996; Vazquez et al., 2001) – for customers' satisfaction and intentions to re-use and recommend the service. Questionnaire design followed informal interview with retail users (customers) and a review of previous questionnaires used for retail quality research. A pilot study was also conducted with a preliminary version of the questionnaire, leading to some modified version and a second pilot test. The final questionnaire was distributed in the city of Aveiro (Portugal) in two ways: physically and online.

248 collected questionnaires were analyzed with the support of SPSS software. The sample included 46.7% male respondents. The main conclusions that are drawn from the preliminary descriptive statistics of the service quality items considered are as follows.

- ✓ The most important item for respondents was freshness and quality of products offered in the fresh sections (e.g., fish, fruit, etc.), which corresponds to the dimension of policies, whereas the least important item for respondents was visual attractiveness of publicity leaflets and other materials related to the service (e.g., shopping bags, catalogs), which corresponds to the dimension of physical aspects.

- ✓ According to customers' responses, reliability is the most important dimension for retail quality, followed by, personal interaction, policies, and physical aspects, respectively.
- ✓ Aspects related to the dimension of policies revealed the higher customer perceptions, followed by physical aspects, personal interactions, and reliability, respectively.
- ✓ Customers expressed good perceptions about the retailers' offering products from well-known and leading brands. On the other extreme, customers were not impressed about the waiting time at cash registers. The dissatisfaction about this item was stronger for the case of supermarkets as compared to hypermarkets.
- ✓ Women showed not only higher expectations but also higher perceptions than men for all the dimensions of service quality. The highest difference between the expectations of men and women was related to the dimension of personal interaction, whereas the highest difference between their perceptions was related to the policies dimension.
- ✓ The existing gaps between customers' expectations and perceptions suggested that the biggest difference between supermarkets and hypermarkets relied on the dimension of policies, whereas the smallest difference belonged to the dimension of reliability. This suggests that hypermarkets are doing better, in the eyes of the customers, in terms of policies, whereas supermarkets offer competitive service in terms of reliability.

Overall, the results suggest that customers have higher perceptions about the quality of hypermarkets when compared to supermarkets. As respondents reported their perceptions about the store they visited more often, this study also suggests that customers predominantly visit the retail store which has the lowest service quality gap for the most important attributes for them (i.e., the freshness and quality of product offered in the fresh section).

Following the descriptive statistical analysis t-tests supported the existence of different customer perceptions across the two types of retail formats considered in the study. Furthermore, the estimation of regression models revealed that the dimensions of reliability and policies have important impacts for customer satisfaction, and for customer recommendations. Personal Interaction aspects seem to play a key role for customers' intentions to re-use the services.

The study has some limitations, notably derived from the fact it was conducted only in the city of Aveiro; therefore, implying some geographical limitations. It also reflects predominantly the views of young and educated customers as most of the respondents were students or alumni of the University of Aveiro. The concern with the length of the questionnaire motivated the choice for

asking respondents to express their service quality perceptions only relatively to the retail store that they visited most often. Future development of this work will therefore need to relax each of the above-mentioned limitations. Moreover, this work, focused only on the main dimensions of the service quality. Future work may extend the study to the service quality sub-dimensions. Finally, exploring the difference between customers' shopping basket and their frequency of visits in supermarkets and hypermarkets needs further investigation.

Overall the results suggest that managerial decisions regarding service in stores should be adjusted to the characteristics of each retail format. The impacts of improvements in reliability and personal interaction differ for supermarkets and hypermarkets. The results also suggest that improvements in customers' perceptions about reliability will have relatively stronger impact on their overall satisfaction in supermarkets than the hypermarkets. On the other hand, improvements in customers' perceptions about personal interaction will result in stronger impacts for customer satisfaction in hypermarkets than the supermarkets.

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APPENDICES

Appendix I – Initial questionnaire

QUESTIONNAIRE - QUALITY OF RETAIL SERVICES

This questionnaire is carried out within the research work that I am currently developing as a student of **Master in the Department of Economics, Management and Industrial Engineering at the University of Aveiro.**

The subject of this study is **Quality and Satisfaction in Retail Services**, particularly in **supermarkets** and **hypermarkets**. The quality monitoring in these contexts is challenging because it must take into account various aspects of the service, from quality of physical facilities to the related aspects of the provided service.

As part of this work, it is intended to study the significant of customers' attribute to different elements of quality in two types of retail: supermarkets (i.e., small to medium size retail stores located in city centers) and hypermarkets (i.e., large stores usually located in the outskirts). Additionally, it is intended to find out the perception that customers have about the service quality of the retail store that they usually use.

Hereby, I request your cooperation in completing this questionnaire and appreciate your precious time and your cooperation.

The estimated time of completion of the questionnaire is 10 minutes.

All your responses will be kept confidential, and only aggregated results will be considered.

Thank you!

FIRST PART

In this section, I would like to know your opinion about the characteristics that each of the two alternative forms of retail should have:

- **Supermarkets**; i.e., retail stores of small/medium size located in urban centers
- **Hypermarkets**; i.e., retail stores of large size usually located in the outskirts.

To this end, I ask you to indicate to what extent you feel the different service characteristics that I describe below are important, for each type of retail stores.

For each feature, please tick number 7 if you feel that the described feature is **extremely important** to the service. If you think that the feature is not important, please tick number 1. If you feel that the feature has average importance, please tick an intermediate score.

Supermarket In a **supermarket** this feature is… **Not important** … **Extremely important** 1 2 3 4 5 6 7	**Expected Features of the Service**	**Hypermarket** In a **hypermarket** this feature is… **Not important** … **Extremely important** 1 2 3 4 5 6 7
	Modernity and attractiveness of store facilities, equipment and fixtures.	
	Visual attractiveness of publicity leaflets and other materials related to the service, such as shopping bags, catalogs, etc.	
	Cleanliness of the store and available support services (e.g., w c, safe-boxes, etc.).	
	Store layout and organization enabling customers to easily find the products they need.	
	Clear indication of product prices.	
	Appropriate and punctual information about sales promotions and discounts.	
	Short waiting time at cash registers.	
	Easy location of products on promotion or discount.	
	Employees showing great interest and motivation to resolve any difficulties or customer problems.	
	Stock availability of products/brands desired by customers.	
	Guarantees of product quality and possibility of returns.	
	All employees consistently showing courtesy towards customers (e.g., cashiers, replenishment staff, etc.).	
	All employees consistently willing to help customers (e.g., cashiers, replenishment staff, etc.).	
	Employees showing enough knowledge to assist and advise customers in the fresh sections (e.g., fish, fruits, etc.)	
	Employees having enough knowledge to assist customers in difficulties and questions.	
	Employees instilling confidence in customers when assisting or advising them.	
	Offer of interesting sales promotions and discounts.	
	Offer of free choice of alternatives for payment (e.g., in cash, via store card, credit card, etc.)	
	Offer of product prices which are lower than in similar establishments.	
	Freshness and quality of products offered in the fresh sections (e.g., fish, fruit, etc.)	
	Offer of products from well-known and leading brands in the market.	
	Offer of a wide assortment of product brands and varieties.	
	Offer of products from the retailers' own brand with high quality.	
	Ease of access to the store and availability of parking spaces.	

SECOND PART

In this section, we would like to know your opinion about the characteristics of the retail store that you use most often. Please, first indicate what type of **store you go most often**.

The store that **I go most often** is a:

☐ **Supermarket**

Please, indicate which supermarket you go most often:
☐Pingo Doce
☐Minipreço
☐Lidl
☐Other _____

☐ **Hypermarket**

Please, indicate which hypermarket you go most often:
☐Continente
☐Jumbo
☐Intermarché
☐Other _____

Now, I ask you to indicate your **opinion about the service of this store**.

For each feature, please tick number 7 if you strongly agree that the store has the described feature. If you think that the store does not have the feature, please tick number 1. If you think that the store partly has the feature, please tick an intermediate score.

Store Name:_____

Observed Service Characteristics	**Strongly Disagree**						**Strongly Agree**
	1	2	3	4	5	6	7
The store offers modern and attractive facilities, equipment and fixtures.							
The publicity leaflets and other materials related to the service (such as shopping bags, catalogs, etc.) are visually attractive.							
The store and available support services (e.g., w c, safe-boxes, etc.) are adequately clean.							
The store layout and organization enables customers to easily find the products they need.							
Prices are clearly indicated.							
The store gives appropriate and punctual information about sales promotions and discounts.							
The waiting time at cash registers is short.							
The products on promotion or discount are easy to locate in the store.							
The store employees show great interest and motivation to resolve any difficulties or customer problems.							
The products/brands desired by customers are always available.							
The store guarantees the quality of the products and offers the possibility of returns.							
All store employees consistently show courtesy towards customers (e.g., cashiers, replenishment staff, etc.).							
All store employees are consistently willing to help customers (e.g., cashiers, replenishment staff, etc.).							
Store employees show enough knowledge to assist and advise customers in the fresh sections (e.g., fish, fruits, etc.)							
Store employees in general have enough knowledge to assist customers in difficulties and questions.							
Store employees instill confidence in customers when assisting or advising them.							
The store offers interesting sales promotions and discounts.							
The store offers customer free choice of alternatives for payment (e.g., in cash, via store card, credit card, etc.)							
The store has product prices which are lower than in similar establishments.							
The store offers fresh and quality of products in the fresh sections (e.g., fish, fruit, etc.)							
The store offers products from well-known and leading brands in the market.							
The store offers a wide assortment of product brands and varieties.							
The store offers high quality products from its own brand.							
The store is easy to access to and has good availability of parking spaces.							

THIRD PART

Finally, I would like to know a little more about you and your opinion about this shopping store.

	Strongly Disagree						**Strongly Agree**
	1	2	3	4	5	6	7
I recommend this store to other customers.							
In the future, I anticipate that I will continue to use this store quite often.							
Overall, I am satisfied with the service provided by this store.							

Now, please indicate your socio-demographic characteristics:

Gender:
☐ Male
☐ Female

Age:
☐Less than 25
☐From 26 to 30
☐From 31 to 40
☐From 41 to 50
☐Over 50

Thank you very much for your cooperation.

Appendix II – Final questionnaire

QUESTIONNAIRE - QUALITY OF RETAIL SERVICES

This questionnaire is part of the research work that I am currently conducting as a master student in the **Department of Economics, Management and Industrial Engineering (DEGEI)** at the **University of Aveiro.**

The subject of this study is **Quality and Satisfaction in Retail Services**, specifically in **supermarkets** and **hypermarkets**. Assessing quality in such context is a challenging task due to considering different aspects of service such as the quality of physical facilities, the quality of service delivery, etc.

Hereby, I kindly request your cooperation in completing this questionnaire, and I appreciate your precious time and your insights. The estimated time for the completion of this questionnaire is about 10 minutes. All your responses will be kept confidential, and only aggregated results will be revealed.

Thank you!

***

In the first part of this questionnaire, I would like to know your opinion about the essential characteristics of the service in a retail store. Please, indicate the importance that you attribute to each of the retail service characteristics that is presented by the following table.

For each service characteristic presented below, please choose score **7** if you consider that characteristic **extremely important**. For the characteristics that you consider **unimportant**, please choose the score **1**. If you consider that a characteristic has a moderate level of importance, please choose an intermediate score (between 1 and 7).

Retail Store Characteristics

	Not important 1	2	3	4	5	6	**Extremely important** 7
Modernity and attractiveness of store facilities, equipment and fixtures.							
Visual attractiveness of publicity leaflets and other materials related to the service, such as shopping bags, catalogs, etc.							
Cleanliness of the store and available support services (e.g., w c, safe-boxes, etc.).							
Store layout and organization enabling customers to easily find the products they need.							
Clear indication of product prices.							
Appropriate and punctual information about sales promotions and discounts.							
Short waiting time at cash registers.							
Easy location of products on promotion or discount.							
Employees showing great interest and motivation to resolve any difficulties or customer problems.							
Stock availability of products/brands desired by customers.							
Guarantees of product quality and possibility of returns.							
All employees consistently showing courtesy towards customers (e.g., cashiers, replenishment staff, etc.).							
All employees consistently willing to help customers (e.g., cashiers, replenishment staff, etc.).							
Employees showing enough knowledge to assist and advise customers in the fresh sections (e.g., fish, fruits, etc.)							
Employees having enough knowledge to assist customers in difficulties and questions.							
Employees instilling confidence in customers when assisting or advising them.							
Offer of interesting sales promotions and discounts.							
Offer of free choice of alternatives for payment (e.g., in cash, via store card, credit card, etc.)							
Offer of product prices which are lower than in similar establishments.							
Freshness and quality of products offered in the fresh sections (e.g., fish, fruit, etc.)							
Offer of products from well-known and leading brands in the market.							
Offer of a wide assortment of product brands and varieties.							
Offer of products from the retailers' own brand with high quality.							
Ease of access to the store and availability of parking spaces.							

In this section, I would like to know your **opinion about the store that you visit most often**.
(Please indicate only one store; i.e., the one you visit the most often.)

☐Pingo Doce ☐Minipreço ☐Continente ☐Jumbo ☐Other _____

For each store characteristic presented below, please choose the score **7** if you **strongly agree** that the store you visit **most often** has the described feature. If you think that the store does not offer that feature, please choose the score **1**. If you consider that a characteristic is only moderately offered by the store, please choose an intermediate score.

Observed Service Characteristics	**Strongly Disagree**						**Strongly Agree**
	1	2	3	4	5	6	7
The store offers modern and attractive facilities, equipment and fixtures.							
The publicity leaflets and other materials related to the service (such as shopping bags, catalogs, etc.) are visually attractive.							
The store and available support services (e.g., w c, safe-boxes, etc.) are adequately clean.							
The store layout and organization enables customers to easily find the products they need.							
Prices are clearly indicated.							
The store gives appropriate and punctual information about sales promotions and discounts.							
The waiting time at cash registers is short.							
The products on promotion or discount are easy to locate in the store.							
The store employees show great interest and motivation to resolve any difficulties or customer problems.							
The products/brands desired by customers are always available.							
The store guarantees the quality of the products and offers the possibility of returns.							
All store employees consistently show courtesy towards customers (e.g., cashiers, replenishment staff, etc.).							
All store employees are consistently willing to help customers (e.g., cashiers, replenishment staff, etc.).							
Store employees show enough knowledge to assist and advise customers in the fresh sections (e.g., fish, fruits, etc.)							
Store employees in general have enough knowledge to assist customers in difficulties and questions.							
Store employees instill confidence in customers when assisting or advising them.							
The store offers interesting sales promotions and discounts.							
The store offers customer free choice of alternatives for payment (e.g., in cash, via store card, credit card, etc.)							
The store has product prices which are lower than in similar establishments.							
The store offers fresh and quality of products in the fresh sections (e.g., fish, fruit, etc.)							
The store offers products from well-known and leading brands in the market.							
The store offers a wide assortment of product brands and varieties.							
The store offers high quality products from its own brand.							
The store is easy to access and has good availability of parking spaces.							

Finally, I would like to know a little more about you and your opinion about this shopping store.

	Strongly Disagree						**Strongly Agree**
	1	2	3	4	5	6	7
I recommend this store to other customers.							
In the future, I anticipate that I will continue to use this store quite often.							
Overall, I am satisfied with the service provided by this store.							

Now, please indicate your socio-demographic characteristics:

Gender:
☐ Male
☐ Female

Age:
☐Less than 25
☐From 26 to 30
☐From 31 to 40
☐From 41 to 50
☐Over 50

Education:
☐Elementary (completed education till the 9th grade)
☐Secondary (completed education between the 10th and 12th grade)
☐University degree (completed a first level of university education)
☐Master degree
☐Doctorate degree

Thank you very much for your cooperation.

Appendix III – Cronbach Alpha for questionnaire

Reliability Statistics

Cronbach's Alpha	N of Items
,917	24